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Hydrographic Data from the Pegasus in the  
Sea of Cortes Area Cruise (PESCAR-01)

21 April - 8 May 1992

by

Thomas A. Rago *et al*  
LT Ross Mitchell, USN  
Luis Felipe Navarro-Olache  
Newell Garfield  
Curtis A. Collins

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Newell Garfield  
and  
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Curtis A. Collins (Leg 1)  
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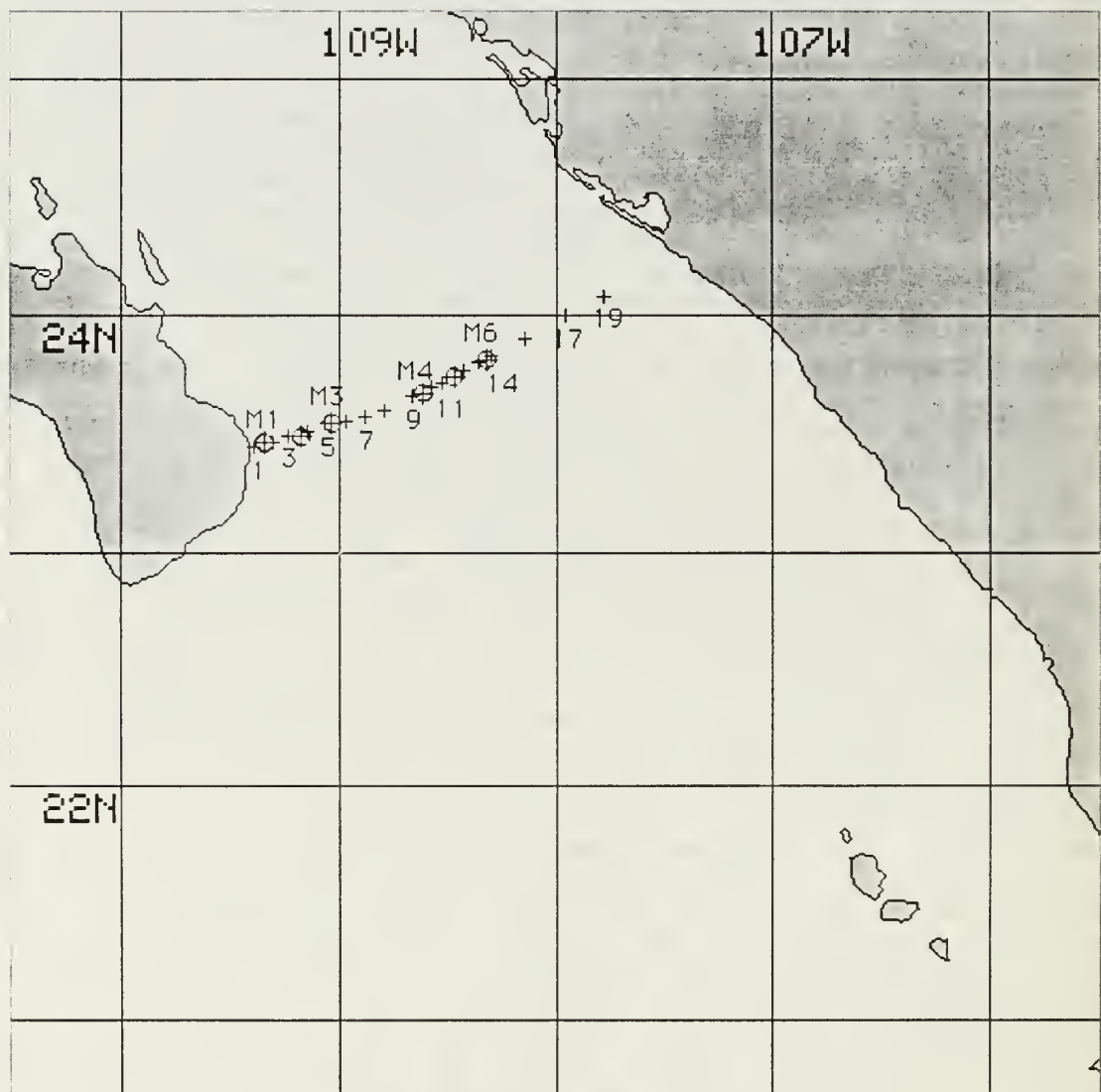


## INTRODUCTION

The data included in this report were collected as part of a joint project between the United States Navy, the Mexican Navy, and the Universidad Autonoma de Baja California (UABC) to study oceanographic currents and hydrographic conditions across the mouth of the Gulf of California/Sea of Cortes (hereafter referred to as the Sea of Cortes). The observations consisted of a transection of conductivity-temperature-depth (CTD) and "Pegasus" acoustic dropsonde stations running east-northeast from the southeast tip of Baja California (south of La Paz, Mexico) approximately 180 km to the continental shelf off El Dorado, Sinaloa, Mexico. The cruise was conducted in two legs, 21-28 April 1992 and 1-8 May 1992, aboard the USNS DeSteiguer. The cruise produced a quasi-synoptic 3-dimensional map of the hydrographic structure and velocity fields in the study area with the intent of improving our understanding of the currents in the area of the mouth of the Sea of Cortes. The sampling grid (Fig. 1) consisted of an across-shore transection of seventeen CTD stations coincident with an across-shore transection of six Pegasus stations. A total of 25 Pegasus drops were made during the two legs of the cruise. Additionally, during the second leg of the cruise a total of 17 CTD casts were completed. All the CTD casts were made to within 50 meters of the bottom (Table 1) with the exceptions of station 3 (400 meters from the bottom) and station 4 (200 meters from the bottom). This data report will present only the hydrographic data from leg 2 of this cruise; another data report will present the Pegasus data from leg 1.

The second leg of this cruise began with the departure of the USNS DeSteiguer from Mazatlan, Sinaloa, Mexico, at 1648 Universal Time (UT) on 1 May 1992. The ship arrived at CTD station 19 (Fig. 1) at 0121 UT on 2 May to begin hydrographic mapping of the transection. After completing the CTD cast at station 19, the ship steamed offshore from the mainland along the transection, successively occupying CTD station 17, then CTD stations 15 through 1 (Fig. 1). Twelve Pegasus drops were interspersed among the CTD casts. The last CTD cast of the transection (CTD 1, Fig. 1) was completed at 1909 UT on 4 May, which completed all operations. The ship then steamed to San Diego, California, U.S.A., arriving at 1449 UT on 8 May. A listing of all CTD stations occupied during the cruise is given in Table 1.

The personnel on this cruise were: Dr. Curtis A. Collins (leg 1), Naval Postgraduate School (NPS); Dr. Newell Garfield, NPS; Mr. Thomas A. Rago, NPS; Mr. Vernon Anderson, NPS; Lt. Ross Mitchell (leg 2), USN, NPS; Dr. Antonio Sanchez-Devora, Secretaria de Marina Estacion Oceanologica, Ensenada, B.C., Mexico; and Mr. Luis Felipe Navarro-Olache, Instituto de Investigaciones Oceanologicas/UABC.



**Figure 1.** CTD (crosses) and Pegasus (circles) station grid and numbers for the PESCAR-01 cruise of 21 April-8 May 1992 aboard the USNS DeSteiguer.

**Table 1.** List of CTD stations occupied by the USNS DeSteiguer during the PESCAR-01 cruise of 21 April-8 May 1992. Date, time, station number, location, water depth at the station, and wind speed and direction are given.

Date	Time (UT)	Sta No.	Latitude (North)	Longitude (West)	Wind		Water Depth (dbar)
					Dir (°T)	Speed (m s <sup>-1</sup> )	
4 May	1856	1	23°26.8'	109°23.5'	330	6.0	170
	1654	2	23°27.6'	109°18.1'	246	5.5	1100
	1237	3	23°29.4'	109°13.8'	298	5.0	1850
	0948	4	23°30.7'	109°08.6'	332	5.5	2350
	0451	5	23°32.7'	109°01.8'	N/A	6.5	2600
	0146	6	23°33.1'	108°58.0'	239	8.5	2340
3 May	2316	7	23°34.4'	108°52.8'	335	6.5	2375
	2122	8	23°35.7'	108°47.6'	319	8.0	1800
	0436	9	23°39.7'	108°39.4'	334	3.5	2680
	0101	10	23°42.0'	108°34.2'	250	5.0	2815
2 May	2118	11	23°43.8'	108°30.9'	190	0.5	2850
	1807	12	23°46.4'	108°25.6'	085	1.0	1800
	1129	13	23°48.3'	108°21.5'	128	4.0	1360
	0925	14	23°50.0'	108°17.7'	161	4.5	795
	0631	15	23°54.5'	108°08.6'	195	1.0	735
	0410	17	24°00.0'	107°57.7'	060	2.0	425
	0121	19	24°05.1'	107°46.6'	245	4.5	85



## HYDROGRAPHIC DATA ACQUISITION AND CALIBRATION

Hydrographic data were acquired using a Neil Brown MK III-B CTD. A General Oceanics rosette sampler was attached to the CTD and was equipped with four 1.5-liter Niskin bottles for *in situ* water sampling. At least two water samples-- one at the deepest depth of the cast and one near the surface-- were collected during the upcast at each station for salinity calibration. The CTD sampling rate was 32 Hz, and raw data were collected using a software package developed by NavOceano (Bay St. Louis, Mississippi, U.S.A.) for use on the USNS DeSteiguer. CTD data were acquired only on the downcast. Generally, a lowering speed of approximately 30 m min<sup>-1</sup> was used to about 150 m, then 60 m min<sup>-1</sup> to the bottom. The data were acquired using a ship-supplied HP computer and were stored on 3.5" floppy disks. The data were subsequently converted to an IBM-compatible format for later processing at NPS.

The temperature and pressure sensors on the CTD were calibrated two months before the cruise by the NavOceano calibration facility in Bay St. Louis, Mississippi. These pre-cruise calibrations were applied to the data both for collection during the cruise and for final data processing. For the pressure calibration, indicated pressures from a known standard and the CTD sensor were recorded at 7 approximately equally spaced pressures from 0 to 6200 dbar. This was done twice, once while the CTD was maintained at a temperature of 22°C, and once while it was maintained at a temperature of 5°C. Regressions were then performed fitting the CTD pressures to those of the standard. The result yielded a linear fit with a slope of 1.000205. The CTD pressure offset at the beginning of each cast was used as the intercept.

For the temperature calibration, indicated temperatures from a known standard and the CTD sensor were recorded at six approximately equally spaced temperatures from 0° to 25°C. A regression was run on the data points, revealing a linear difference between the standard and the CTD temperature sensor. The coefficients were 1.0001243 (slope) and -0.001588 (intercept). Although surface water temperatures during this cruise were greater than any used during the CTD temperature calibration, extrapolation of the linear fit to those data was not considered a problem given the near unity of the slope of the fitted curve.

A total of 44 water samples were taken at 17 CTD stations for calibration of the CTD salinity data. The CTD pressure, conductivity, and temperature were recorded as each sample was taken. These numbers were used to calculate salinity and the results compared with the water sample salinities determined using an AGE Minisal in the laboratory. The station, depth of sample, CTD calculated salinity, water sample salinity from the AGE Minisal, and difference between CTD and Minisal salinities are listed in Table 2. The mean and standard deviation of the

**Table 2.** List of CTD salinities (calculated from the corrected pressure, temperature, and conductivity readings), water sample salinities (measured by the AGE Minisal salinometer of samples collected at the same depths from which the CTD salinities were measured), and the differences between the two sets of salinities.

Station	Pressure (dbar)	Salinity (psu)		
		CTD	Bottle	Difference
=====				
1	4.1	34.626	34.619	0.007
	131.5	34.830	34.831	-0.001
2	1.0	34.620	34.614	0.006
	1091.4	34.551	34.557	-0.006
3	2.1	34.674	34.679	-0.005
	1002.0	34.542	34.543	-0.001
	1002.0	34.542	34.543	-0.001
	1449.0	34.596	34.601	-0.005
4	4.0	34.668	34.662	0.006
	1001.9	34.543	34.542	0.001
	1001.9	34.543	34.542	0.001
	2158.8	34.643	34.654	-0.011
5	2.2	34.641	34.631	0.010
	1003.0	34.546	34.545	0.001
	1003.0	34.546	34.547	-0.001
	2562.0	34.659	34.661	-0.002
6	3.5	34.649	34.636	0.013
	1006.4	34.543	34.543	0.000
	1006.4	34.543	34.541	0.002
	2301.4	34.652	34.656	-0.004
7	0.0	34.634	34.623	0.011
	1003.3	34.547	34.546	0.001
	1003.3	34.547	34.546	0.001
	2374.4	34.656	34.657	-0.001
8	2.7	34.645	34.631	0.014
	1000.5	34.550	34.548	0.002
	1000.5	34.550	34.547	0.003
	1790.8	34.633	34.637	-0.004
9	1000.3	34.545	34.550	-0.005
	2673.3	34.656	34.660	-0.004
10	1.2	34.649	34.635	0.014
	1001.9	34.543	34.541	0.002
	2805.2	34.659	34.661	-0.002
11	3.3	34.633	34.623	0.010
	1000.7	34.542	34.540	0.002
	2832.1	34.658	34.662	-0.004
12	3.0	34.618	34.622	-0.004
	1001.0	34.542	34.537	0.005
	1749.7	34.624	34.626	-0.002
13	944.0	34.534	34.528	0.006
	1345.0	34.594	34.592	0.002

Table 2. (continued)

Station	Pressure (dbar)	Salinity (psu)		
		CTD	Bottle	Difference
=====				
14	2.5	34.550	34.539	0.011
	757.8	34.515	34.513	0.002
17	4.5	34.561	34.557	0.004
	402.4	34.639	34.639	0.000



differences between the CTD salinities and sample salinities were calculated. Data points greater than two standard deviations from the mean were discarded. A regression analysis was then run on the remaining data points, revealing a linear difference between the CTD salinity and the bottle sample salinity with a slope of 0.974700 and an intercept of +0.885300. Following the application of this correction to the CTD salinities, the standard deviation of the difference between the bottle salinities and the corrected CTD salinity was reduced to 0.005795, with a standard error of 0.0008639. These were the final adjustments to the CTD salinity.

## HYDROGRAPHIC DATA PROCESSING

The raw CTD data were processed on an IBM Mainframe computer using software developed at NPS specifically for the processing of data collected with the Neil Brown MK III-B CTD system. The software allows the user to examine the raw data and to interpolate across obviously bad data if necessary. After the elimination through interpolation of any bad data, salinity was re-calculated from corrected values of temperature, pressure, and conductivity. The final salinity correction (as described above) was then applied.

## DATA PRESENTATION

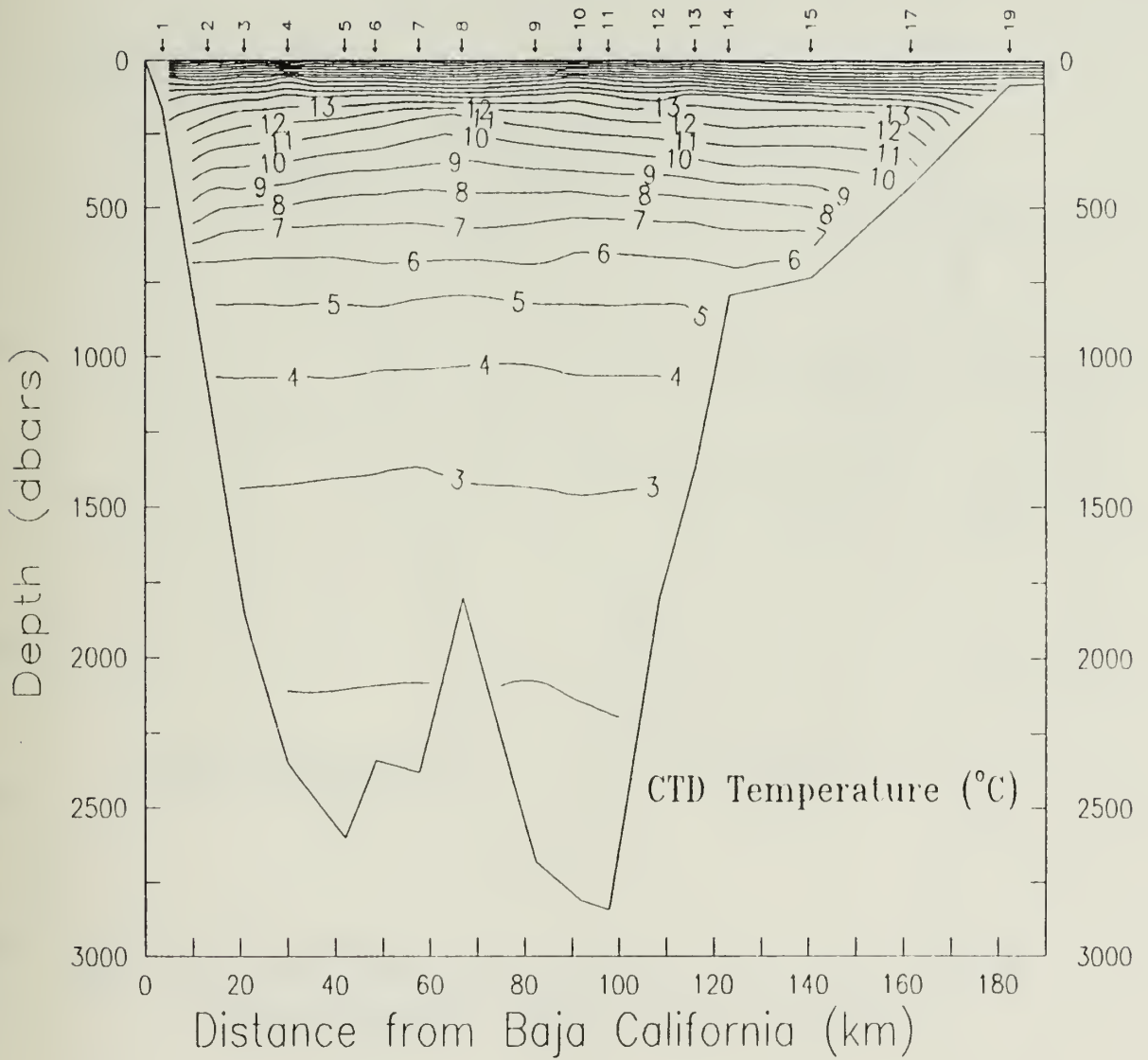
The CTD (and Pegasus) station positions and numbers for the cruise are shown in Fig. 1. Hydrographic data are presented in the form of vertical sections, waterfall plots, a T/S plot, and data listings. Vertical sections of temperature ( $^{\circ}\text{C}$ ), salinity (psu), density anomaly ( $\text{kg m}^{-3}$ ), and spiciness ( $\pi$ ) from 0-3000 dbar are shown in Figs. 2. The same vertical sections from 0-500 dbar are shown in Figs. 3. In all these sections station positions are indicated by labelled arrows along the top of each plot. Density anomaly ( $\gamma$ ) in these sections was calculated according to the algorithms found in Volume 4 of the International Oceanographic Tables (UNESCO, 1987) using potential temperature, atmospheric pressure, and *in situ* salinity, while spiciness ( $\pi$ ) (Jackett and McDougall, 1985) was calculated according to the algorithm of Flament (unpublished manuscript, 1986).

Waterfall plots of temperature, salinity, density anomaly, and spiciness from 0-3000 dbar are shown in Figs. 4. In all waterfall plots the leftmost profile is plotted as true values, while the data values for each profile to the right are successively incremented by the amount indicated on the figure. Figure 5 is a T/S diagram which includes selected data from all CTD stations completed during the cruise. These selected data from each CTD cast are listed in Appendix A.

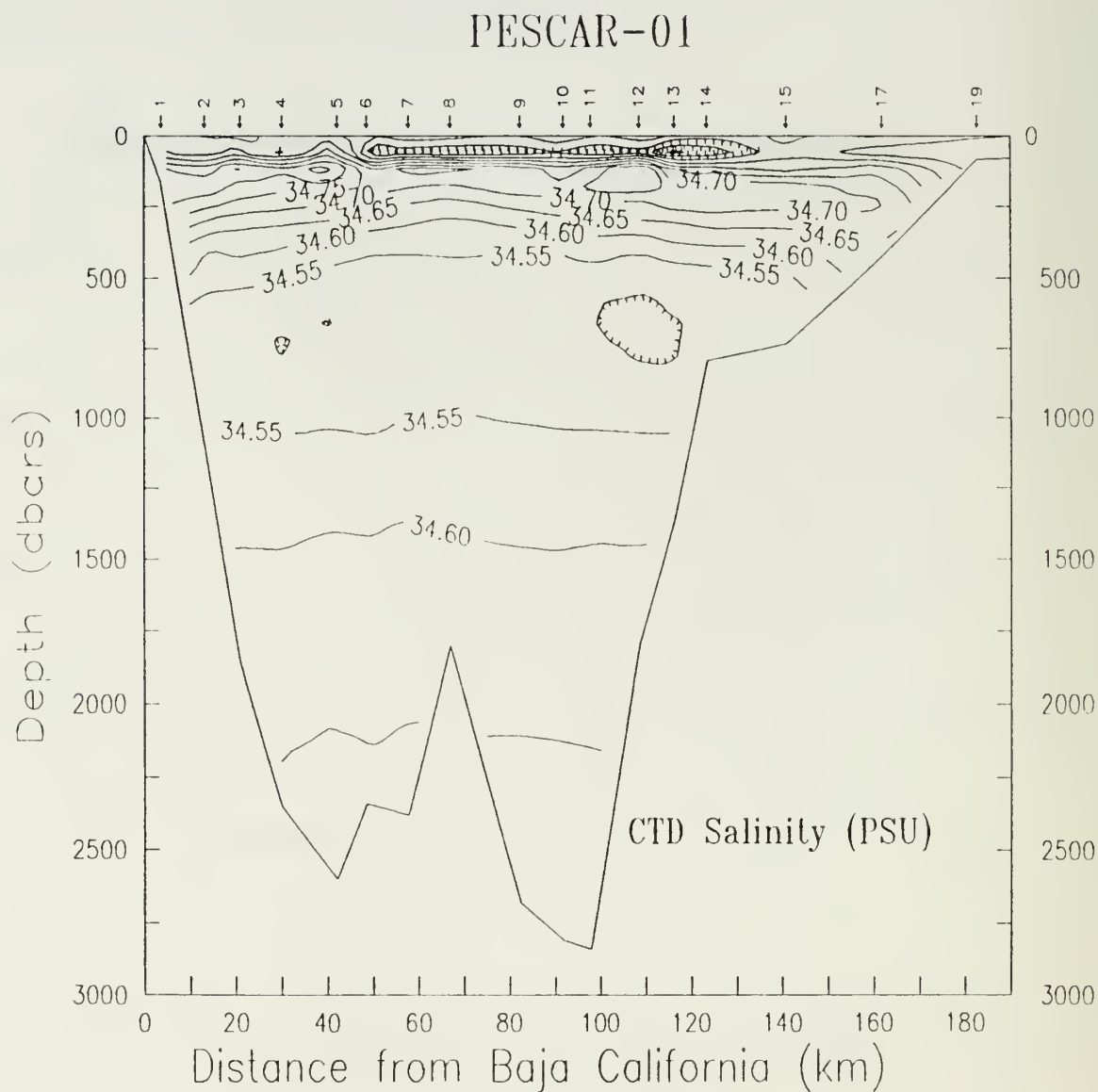
## ACKNOWLEDGEMENTS

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# PESCAR-01

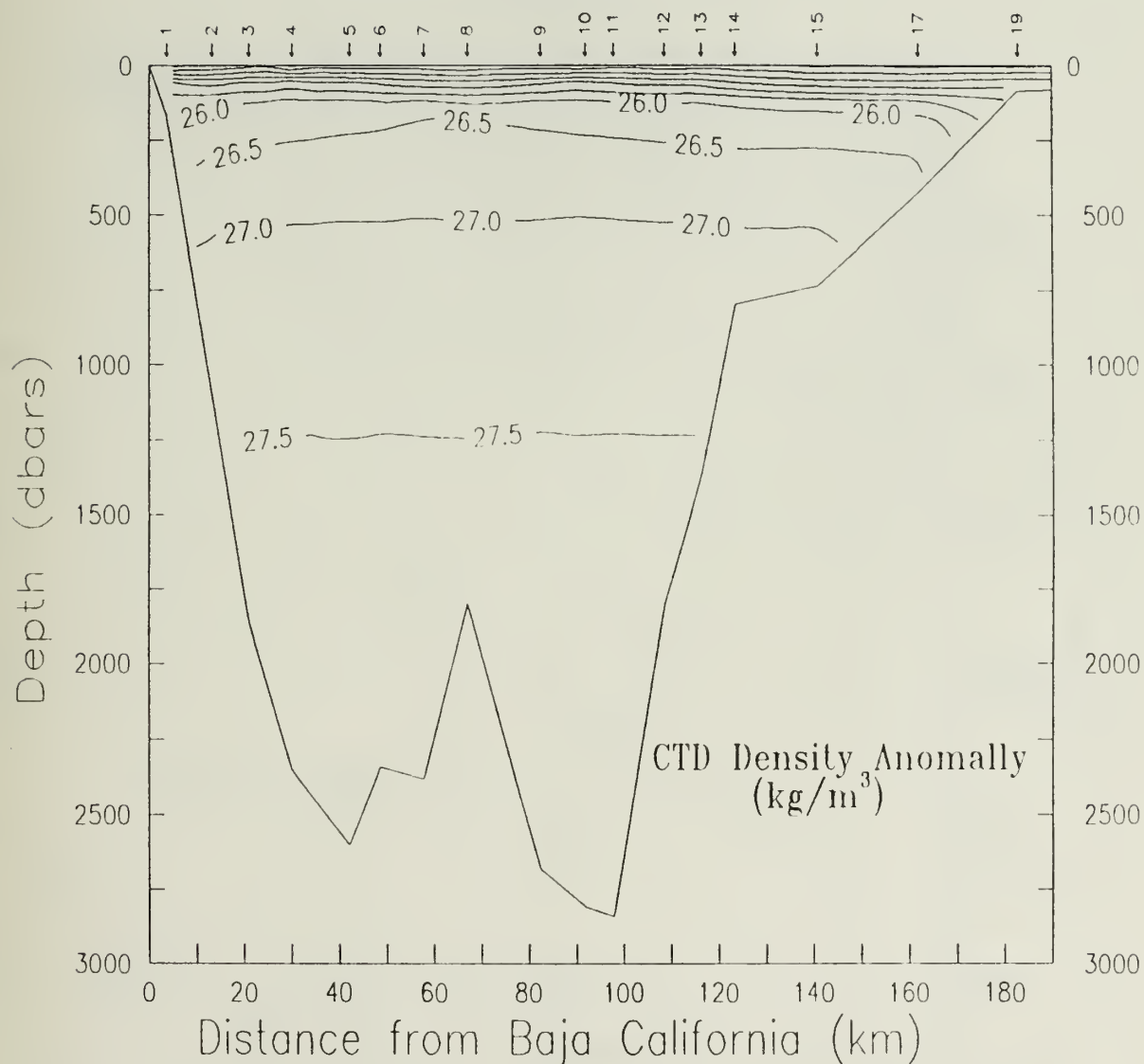


**Figure 2a.** Vertical section of temperature, contoured at 1.0°C intervals, from 0 to 3000 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.

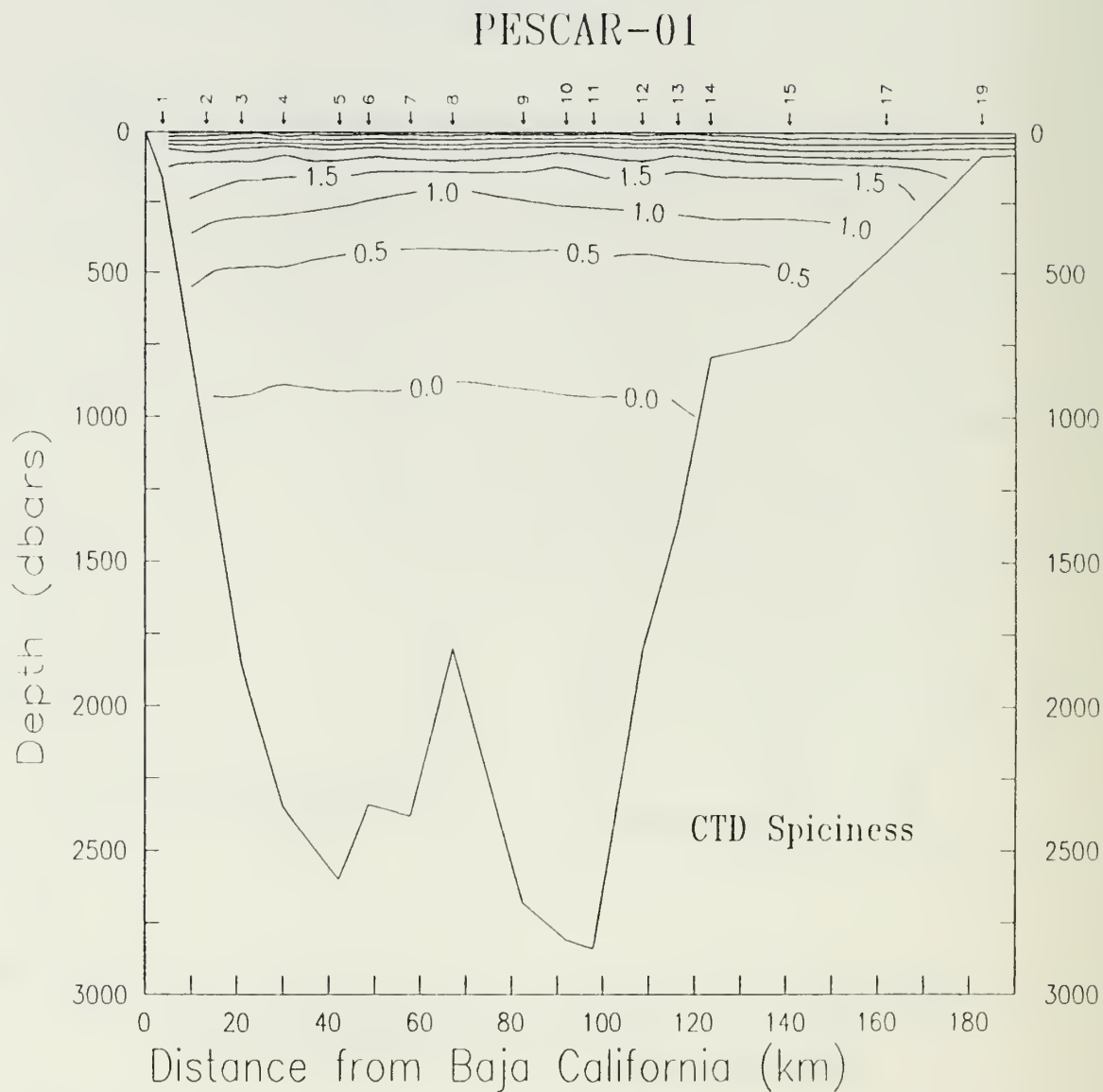


**Figure 2b.** Vertical section of salinity, contoured at 0.05 psu intervals, from 0 to 3000 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.

# PESCAR-01



**Figure 2c.** Vertical section of density anomaly, contoured at  $0.5 \text{ kg m}^{-3}$  intervals, from 0 to 3000 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.

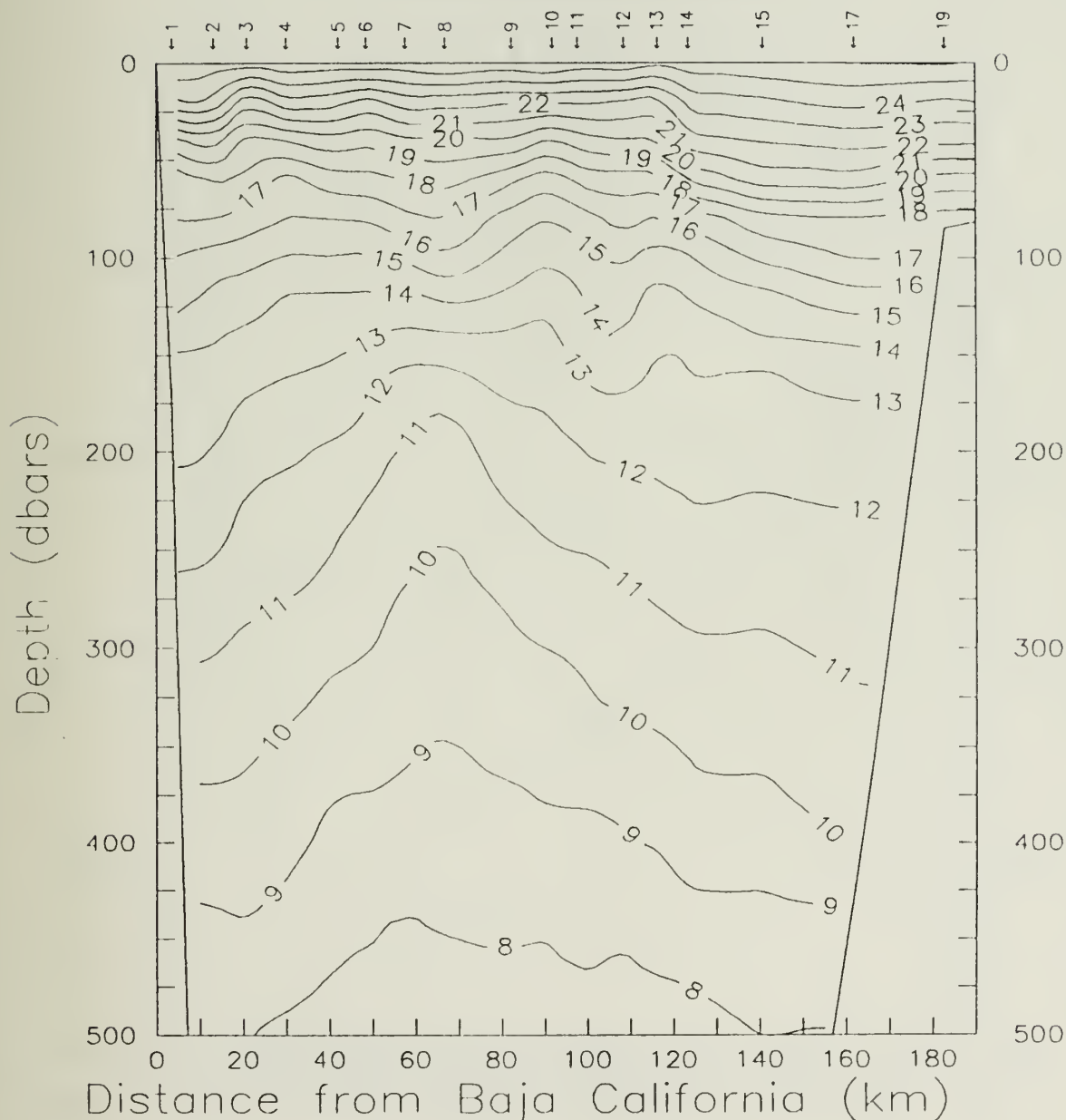


**Figure 2d.** Vertical section of spiciness ( $\pi$ ), contoured at 0.5 intervals, from 0 to 3000 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.



# PESCAR-01

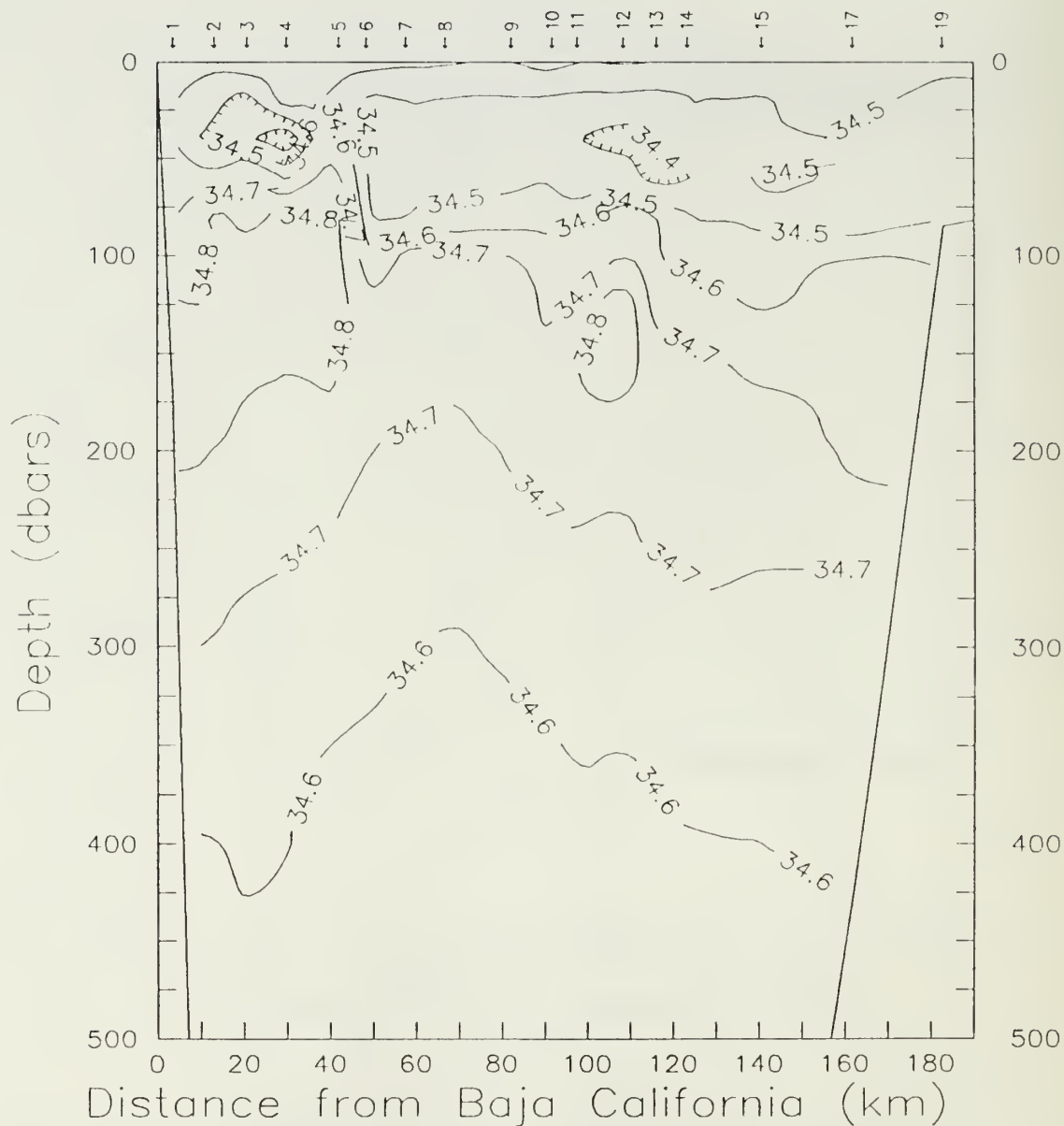
CTD Temperature ( $^{\circ}\text{C}$ )



**Figure 3a.** Vertical section of temperature, contoured at  $1.0^{\circ}\text{C}$  intervals, from 0 to 500 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.

# PESCAR-01

## CTD Salinity (PSU)

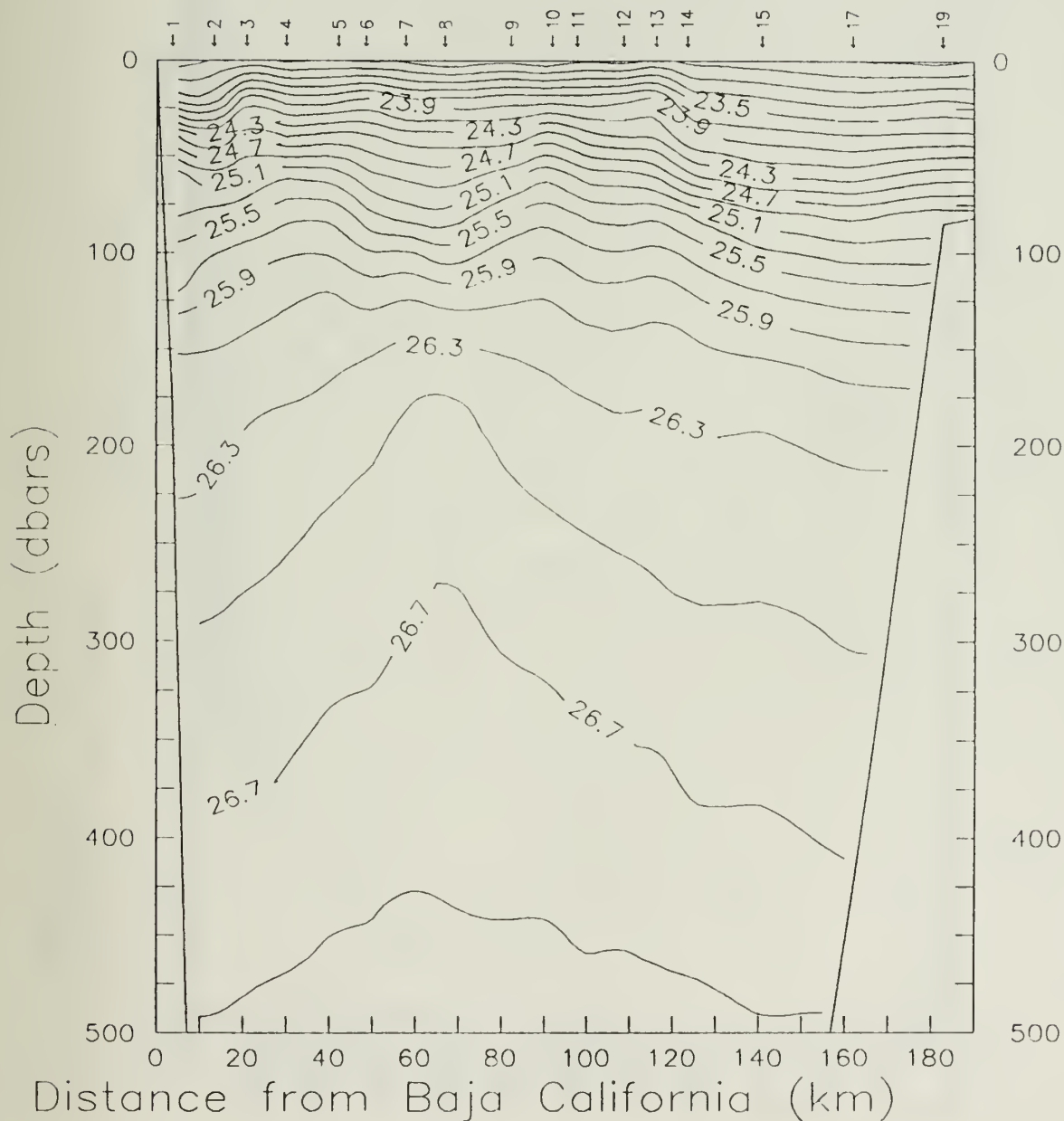


**Figure 3b.** Vertical section of salinity, contoured at 0.1 psu intervals, from 0 to 500 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.



# PESCAR-01

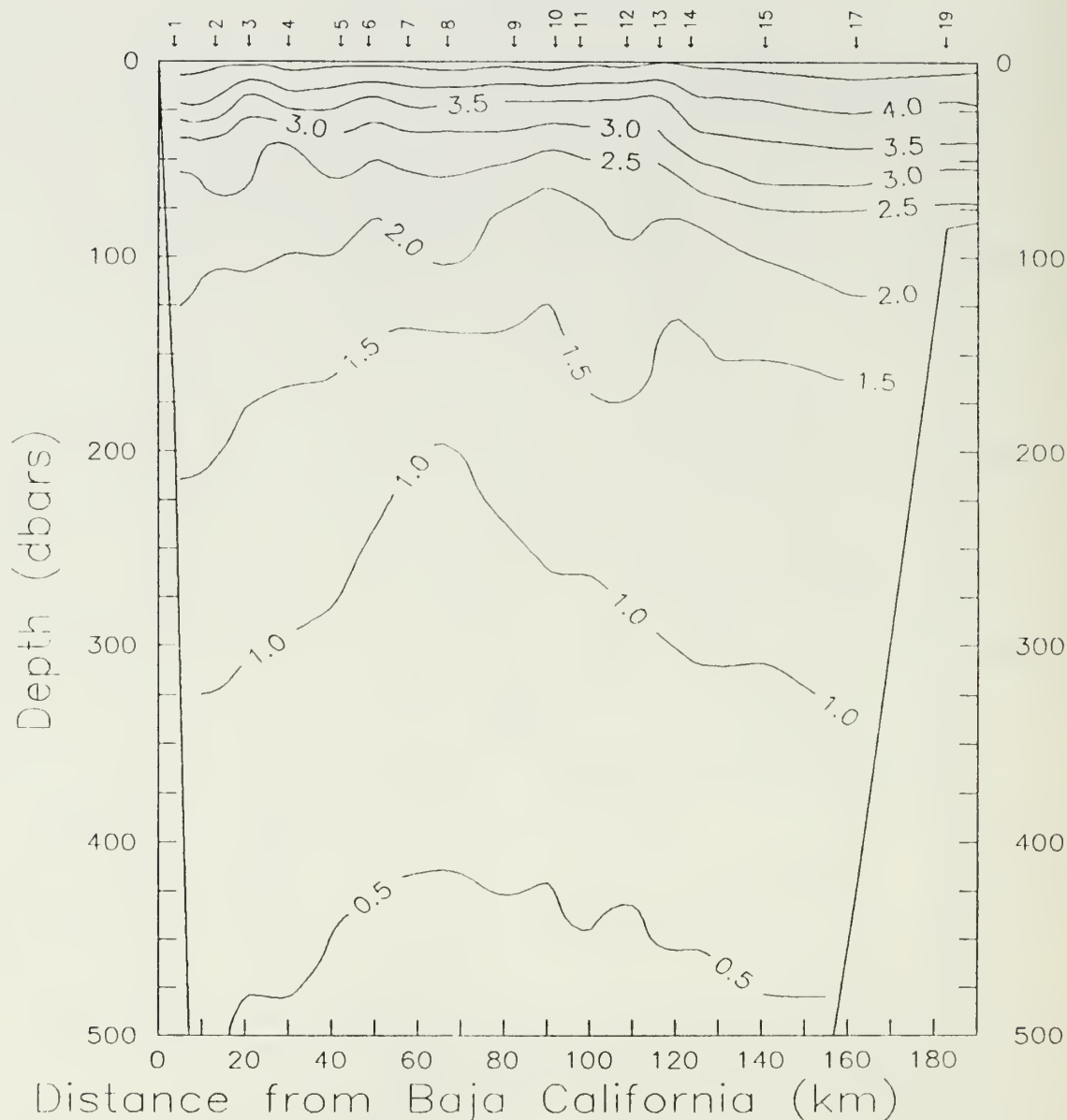
CTD Density Anomaly ( $\text{kg/m}^3$ )



**Figure 3c.** Vertical section of density anomaly, contoured at  $0.2 \text{ kg m}^{-3}$  intervals, from 0 to 500 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.

# PESCAR-01

## CTD Spiciness



**Figure 3d.** Vertical section of spiciness ( $\pi$ ), contoured at 0.5 intervals, from 0 to 500 dbar for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992. CTD station locations are indicated by labelled arrows across the top of the figure.

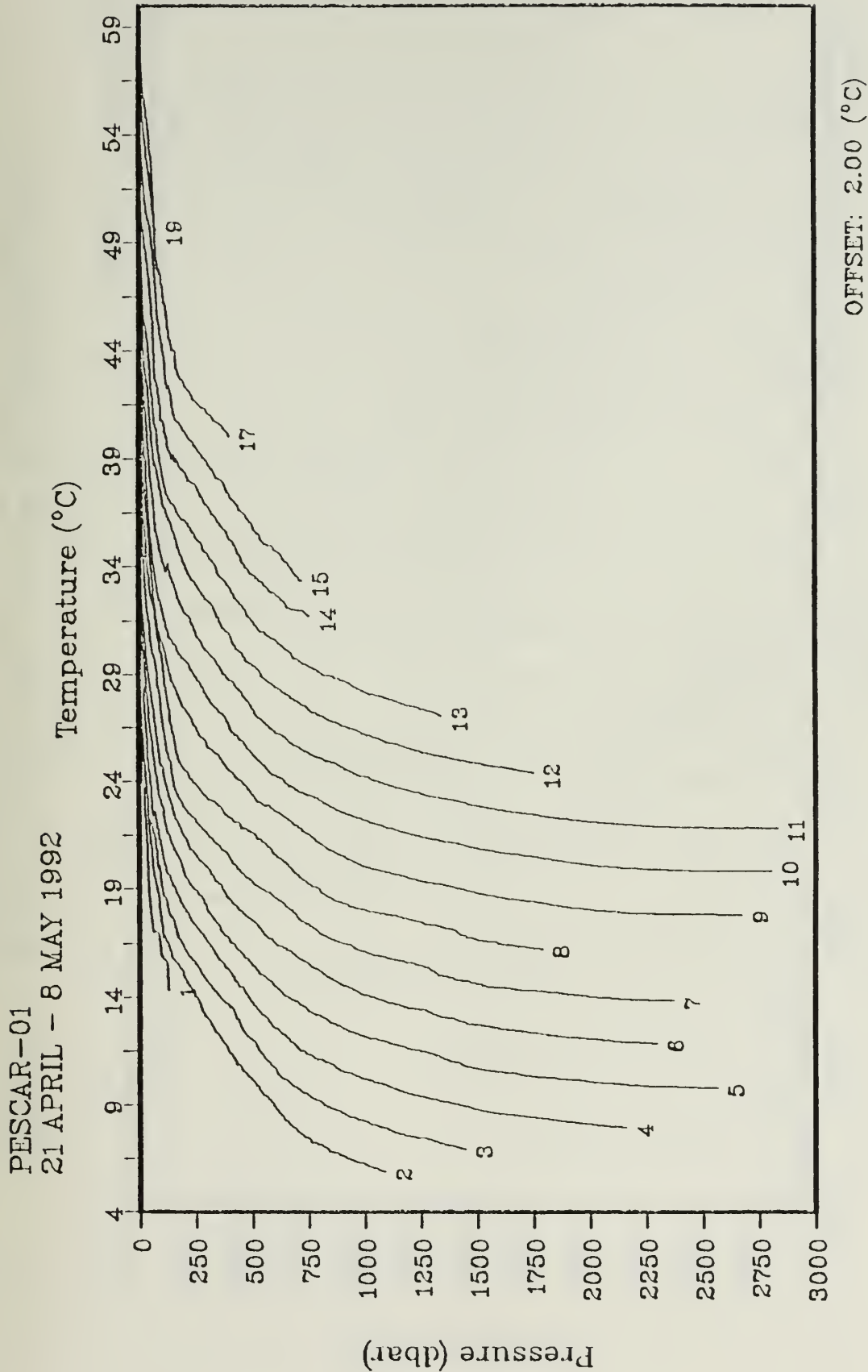
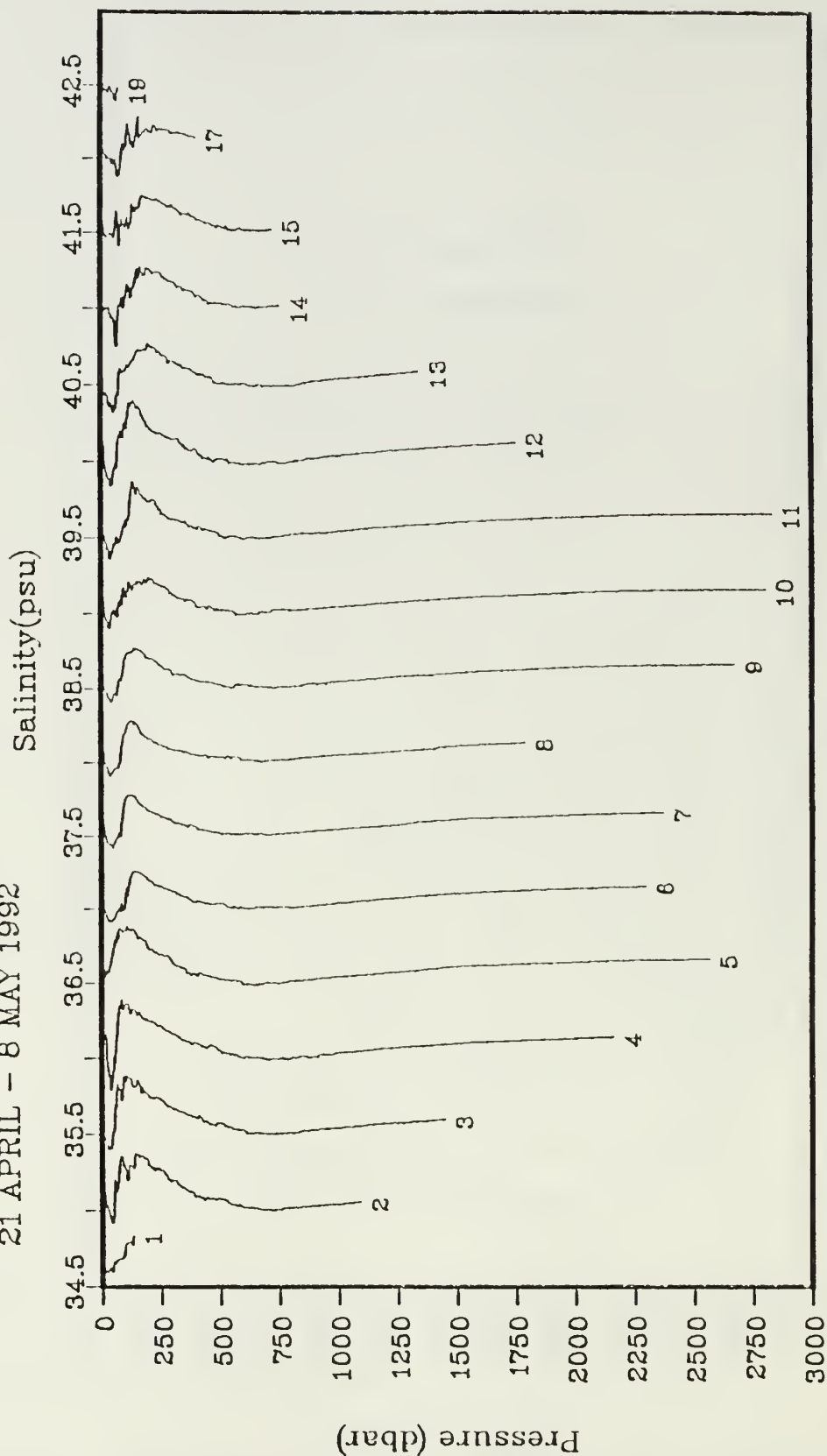


Figure 4a. Waterfall plots from 0 to 3000 m of temperature (°C) for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992.

PESCAR-01  
21 APRIL - 8 MAY 1992

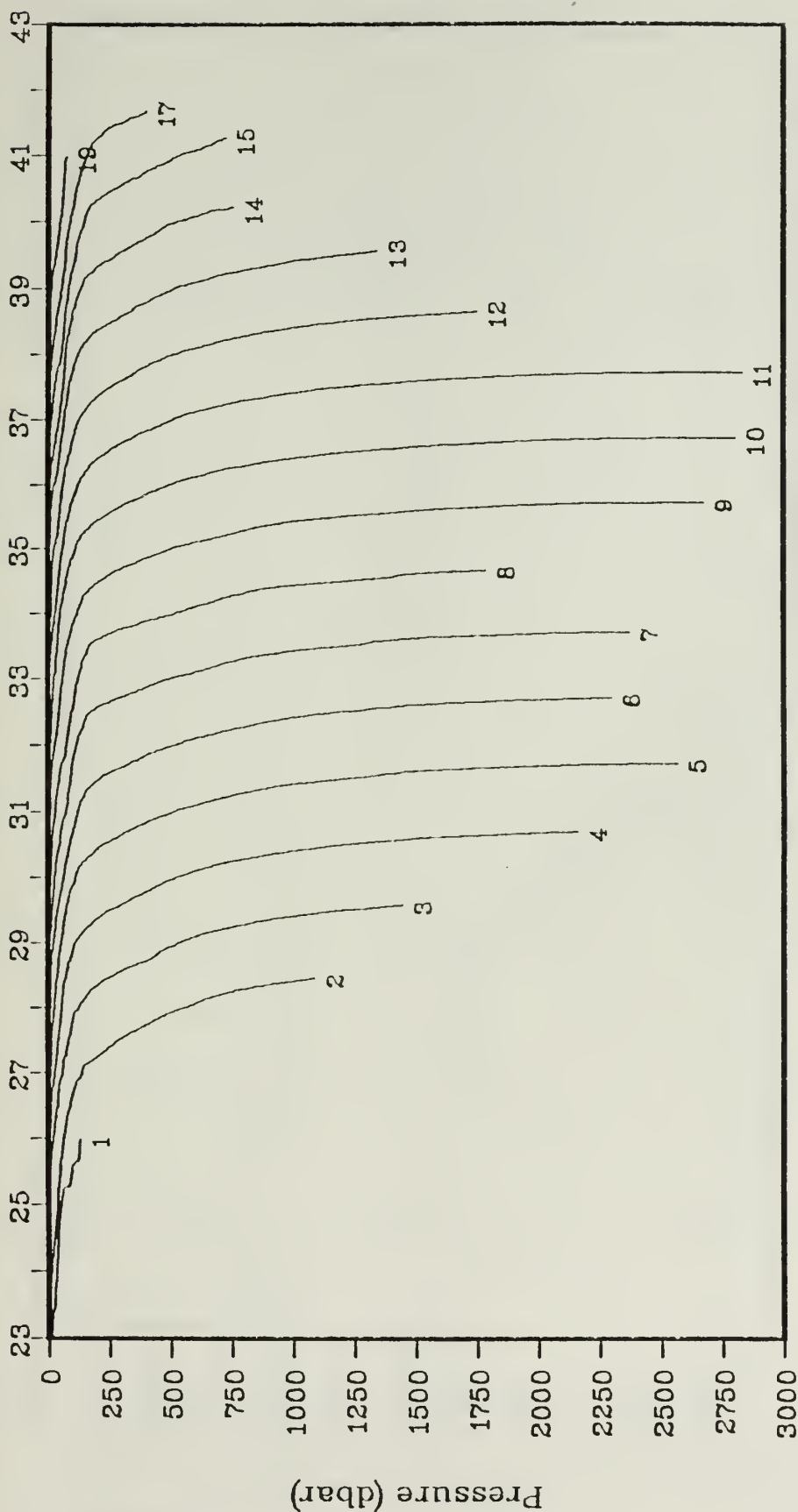


OFFSET: 0.50 (psu)

Figure 4b. Waterfall plots from 0 to 3000 m of salinity (psu) for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992.

PESCAR-01  
21 APRIL - 8 MAY 1992

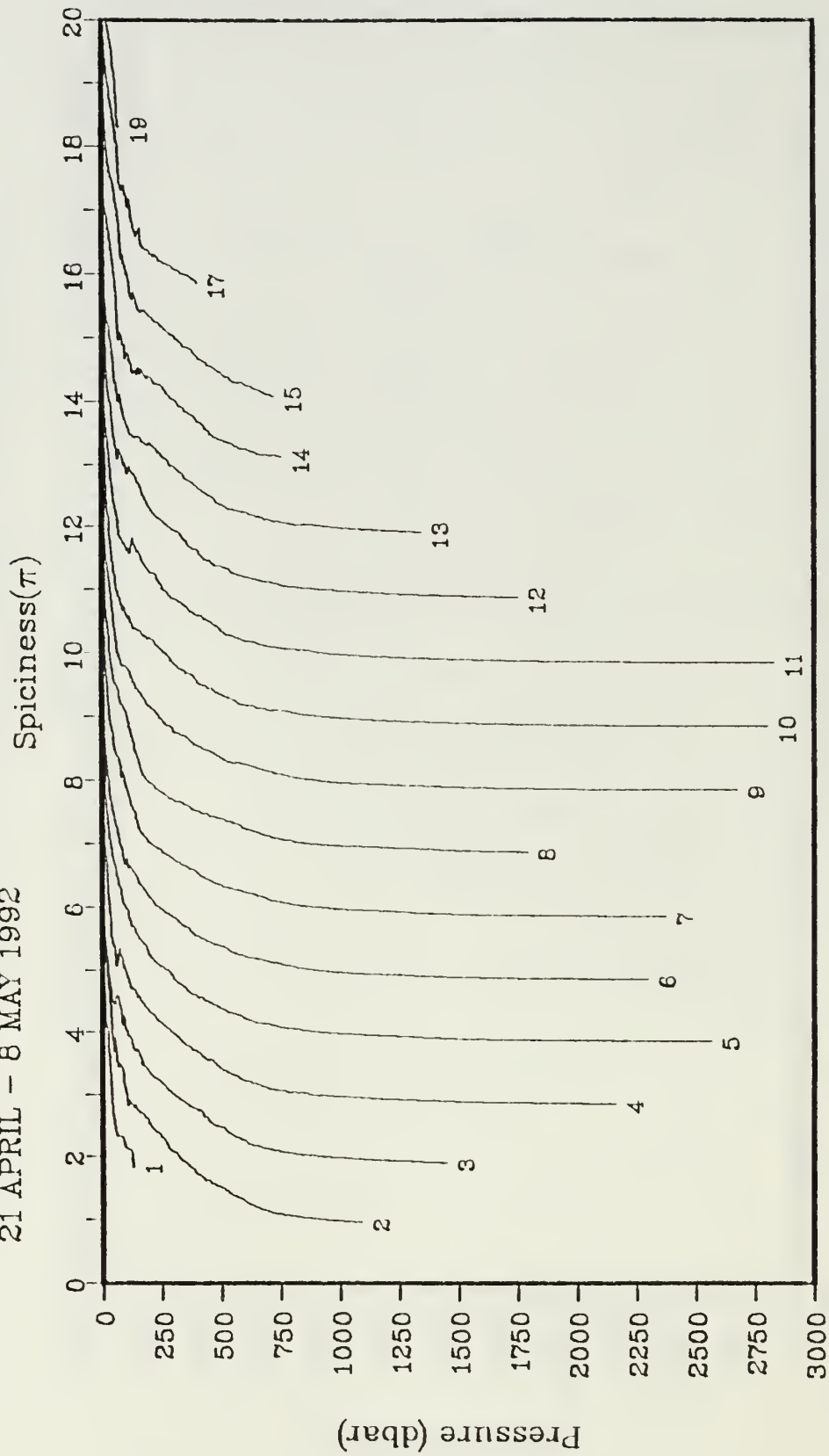
Density anomaly ( $\gamma_\theta$ )



OFFSET: 1.00 ( $\text{kg m}^{-3}$ )

Figure 4c. Waterfall plots from 0 to 3000 m of density anomaly ( $\text{kg m}^{-3}$ ) for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992.

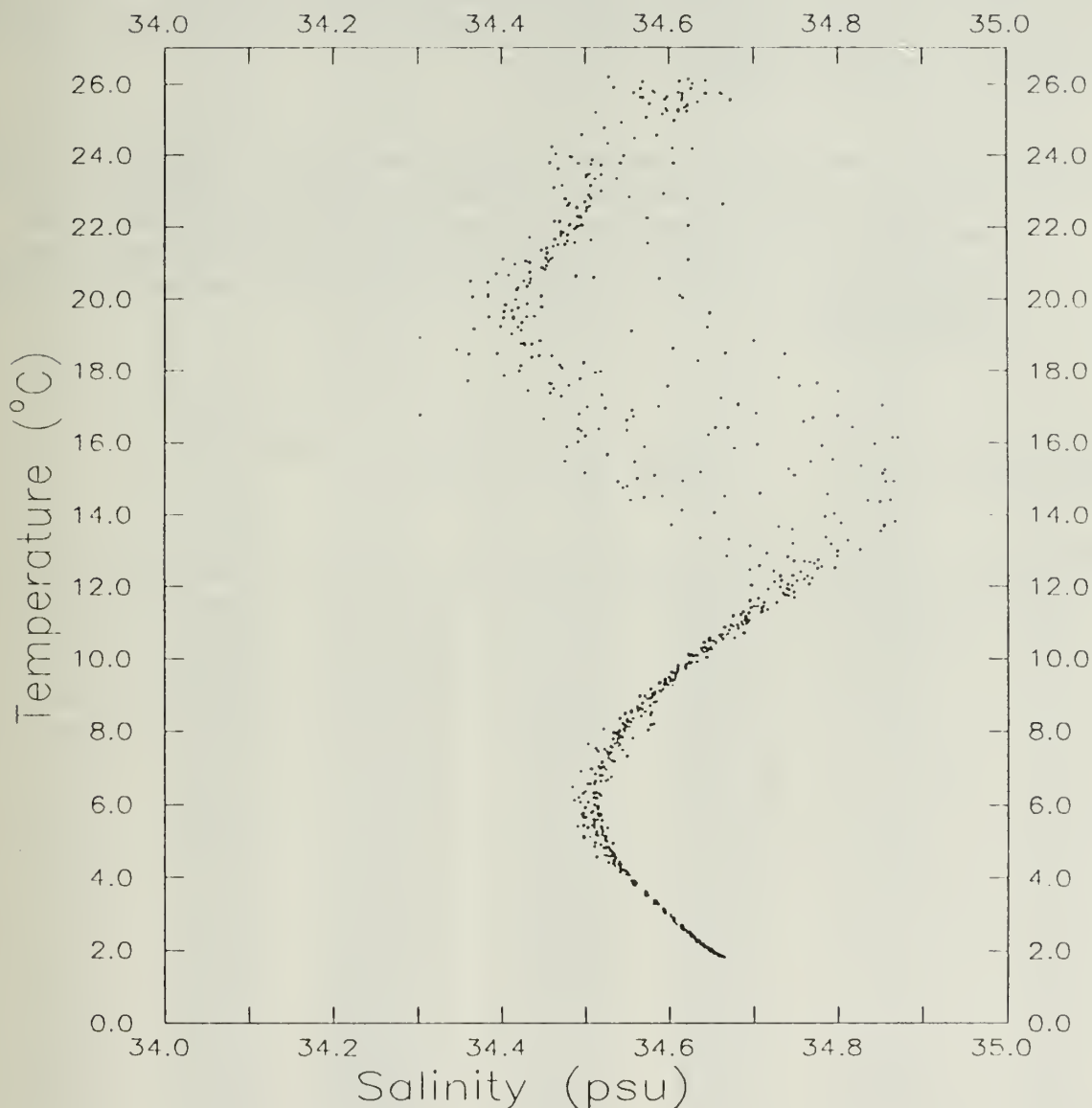
PESCAR-01  
21 APRIL - 8 MAY 1992



OFFSET: 1.00 ( $\text{kgm}^{-3}$ )

Figure 4d. Waterfall plots from 0 to 3000 m of spiciness ( $\pi$ ) for the CTD transection of the PESCAR-01 cruise, 21 April-8 May 1992.

## PESCAR-01



**Figure 5.** T/S diagram which includes selected data from all CTD stations completed during the PESCAR-01 cruise of 21 April-8 May 1992 aboard the USNS DeSteiguer. The data included in this diagram are listed in Appendix A.



# APPENDIX A

## CTD DATA LISTINGS

In the following table, station data are listed in numerical order. The specific volume anomaly ( $\delta$ ) is calculated using the algorithms found in Volume 4 of the International Oceanographic Tables (UNESCO, 1987). The units for  $\delta$  are  $10^{-8} \text{ m}^3 \text{ kg}^{-1}$ . The summation of dynamic height ( $\Sigma\Delta D$ ) is made from the surface and the units are in dynamic meters ( $\text{m}^2 \text{ s}^{-2}$ ).

**Table 3.** Data listings at selected pressures of temperature ( $^{\circ}\text{C}$ ), salinity (psu), density anomaly ( $\text{kg m}^{-3}$ ), specific volume anomaly ( $\delta$ ), summation of dynamic height ( $\Sigma\Delta D$ ), and spiciness ( $\pi$ ) for CTD stations occupied during the PESCAR-01 cruise of 21 April-8 May 1992 aboard the USNS DeSteiguer.

STATION: 1                      DATE: 5/ 4/92                      1853 GMT  
LAT:  $23^{\circ}$  26.8 N.                      LON:  $109^{\circ}$  23.5 W.

P(dbar)	T( $^{\circ}\text{C}$ )	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.869	34.626	22.794	505.25	0.005	4.73
5.0	25.858	34.626	22.798	505.08	0.025	4.73
10.0	25.726	34.616	22.831	502.09	0.051	4.68
15.0	24.195	34.604	23.286	458.80	0.075	4.20
20.0	23.772	34.605	23.412	446.98	0.097	4.08
25.0	22.919	34.593	23.651	424.37	0.119	3.82
30.0	22.029	34.623	23.926	398.31	0.140	3.59
35.0	21.090	34.623	24.186	373.75	0.159	3.32
40.0	20.021	34.616	24.467	347.13	0.177	3.03
45.0	18.617	34.604	24.818	313.72	0.193	2.66
50.0	18.485	34.666	24.899	306.21	0.209	2.67
60.0	17.232	34.661	25.202	277.64	0.238	2.36
70.0	17.053	34.681	25.261	272.42	0.265	2.33
80.0	17.044	34.681	25.263	272.53	0.292	2.33
90.0	16.816	34.703	25.334	266.08	0.319	2.29
100.0	15.921	34.780	25.601	240.94	0.344	2.14
125.0	15.538	34.793	25.698	232.45	0.404	2.06
131.0	14.390	34.835	25.982	205.47	0.417	1.84



STATION: 2  
LAT: 23° 27.6 N.

DATE: 5/ 4/92  
LON: 109° 18.0 W.

1653 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
2.0	25.424	34.622	22.928	492.46	0.010	4.59
5.0	25.333	34.618	22.953	490.20	0.025	4.56
10.0	25.293	34.611	22.961	489.73	0.049	4.54
15.0	24.471	34.559	23.170	469.91	0.073	4.25
20.0	23.973	34.546	23.309	456.90	0.097	4.09
25.0	23.152	34.507	23.519	437.00	0.119	3.82
30.0	22.536	34.502	23.692	420.71	0.140	3.64
35.0	21.778	34.479	23.887	402.24	0.161	3.40
40.0	20.563	34.435	24.185	373.99	0.180	3.04
45.0	19.862	34.431	24.367	356.75	0.199	2.85
50.0	19.102	34.555	24.658	329.16	0.216	2.74
60.0	18.285	34.634	24.925	304.11	0.248	2.60
70.0	17.573	34.754	25.192	279.01	0.277	2.51
80.0	17.036	34.852	25.396	259.88	0.304	2.46
90.0	16.422	34.817	25.514	248.95	0.329	2.29
100.0	15.470	34.767	25.692	232.16	0.353	2.03
125.0	14.567	34.787	25.907	212.45	0.408	1.84
150.0	13.818	34.867	26.128	192.07	0.459	1.75
175.0	13.543	34.850	26.172	188.51	0.506	1.68
200.0	12.996	34.799	26.244	182.20	0.553	1.53
225.0	12.556	34.780	26.317	175.81	0.597	1.42
250.0	12.065	34.765	26.401	168.31	0.640	1.32
275.0	11.550	34.727	26.469	162.26	0.682	1.19
300.0	11.065	34.695	26.533	156.51	0.722	1.07
325.0	10.654	34.667	26.586	151.92	0.760	0.98
350.0	10.322	34.648	26.629	148.14	0.798	0.91
375.0	9.912	34.623	26.680	143.58	0.834	0.82
400.0	9.435	34.594	26.737	138.34	0.870	0.71
425.0	9.164	34.592	26.780	134.59	0.904	0.67
450.0	8.818	34.584	26.829	130.14	0.937	0.61
475.0	8.472	34.577	26.878	125.69	0.968	0.55
500.0	8.175	34.577	26.923	121.57	0.999	0.50
550.0	7.487	34.543	26.998	114.62	1.058	0.37
600.0	6.955	34.524	27.058	109.11	1.115	0.28
650.0	6.287	34.516	27.141	101.11	1.167	0.19
700.0	5.801	34.507	27.196	95.90	1.216	0.12
750.0	5.483	34.510	27.237	92.11	1.263	0.08
800.0	5.172	34.520	27.283	87.93	1.308	0.05
850.0	4.832	34.527	27.327	83.64	1.351	0.02
900.0	4.644	34.532	27.353	81.43	1.392	0.00
950.0	4.436	34.540	27.382	78.75	1.432	-0.01
1000.0	4.275	34.541	27.400	77.16	1.471	-0.03
1092.0	3.906	34.559	27.454	72.14	1.540	-0.05

STATION: 3  
LAT: 23° 29.4 N.

DATE: 5/ 4/92  
LON: 109° 13.8 W.

1236 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.552	34.673	22.927	492.50	0.005	4.67
5.0	23.340	34.538	23.487	439.22	0.024	3.90
10.0	22.578	34.479	23.661	422.78	0.045	3.63
15.0	21.841	34.474	23.865	403.56	0.066	3.42
20.0	21.349	34.448	23.981	392.66	0.086	3.26
25.0	20.750	34.434	24.133	378.33	0.105	3.09
30.0	19.837	34.405	24.353	357.51	0.123	2.82
35.0	19.456	34.414	24.459	347.59	0.141	2.73
40.0	18.696	34.428	24.664	328.26	0.158	2.54
45.0	18.224	34.498	24.835	312.08	0.174	2.48
50.0	17.975	34.518	24.912	304.93	0.189	2.43
60.0	17.803	34.730	25.117	285.79	0.219	2.55
70.0	17.428	34.800	25.262	272.32	0.247	2.51
80.0	16.691	34.770	25.415	258.08	0.273	2.31
90.0	16.143	34.870	25.619	238.93	0.298	2.26
100.0	15.153	34.852	25.828	219.21	0.321	2.02
125.0	14.364	34.849	25.998	203.74	0.373	1.85
150.0	13.710	34.854	26.140	190.86	0.422	1.71
175.0	12.750	34.776	26.274	178.53	0.469	1.46
200.0	12.313	34.746	26.337	173.10	0.513	1.35
225.0	11.906	34.742	26.413	166.46	0.555	1.27
250.0	11.580	34.727	26.463	162.22	0.596	1.19
275.0	11.165	34.690	26.511	158.08	0.636	1.09
300.0	10.789	34.671	26.564	153.42	0.675	1.01
325.0	10.440	34.655	26.614	149.11	0.713	0.93
350.0	10.171	34.640	26.649	146.17	0.750	0.87
375.0	9.860	34.625	26.691	142.56	0.786	0.81
400.0	9.632	34.609	26.717	140.47	0.821	0.76
425.0	9.283	34.598	26.766	136.07	0.856	0.69
450.0	8.704	34.576	26.841	128.93	0.889	0.58
475.0	8.260	34.559	26.896	123.76	0.921	0.50
500.0	8.040	34.574	26.941	119.74	0.951	0.48
550.0	7.311	34.549	27.028	111.61	1.009	0.35
600.0	6.747	34.530	27.091	105.73	1.063	0.26
650.0	6.191	34.513	27.151	100.03	1.114	0.17
700.0	5.795	34.506	27.196	95.89	1.163	0.12
750.0	5.454	34.507	27.239	91.95	1.210	0.08
800.0	5.191	34.512	27.274	88.76	1.255	0.05
850.0	4.841	34.524	27.324	83.98	1.298	0.02
900.0	4.631	34.532	27.354	81.27	1.340	0.00
950.0	4.420	34.540	27.384	78.55	1.380	-.01
1000.0	4.250	34.545	27.406	76.56	1.419	-.03
1100.0	3.921	34.556	27.450	72.61	1.493	-.05
1200.0	3.564	34.573	27.499	67.86	1.562	-.08
1300.0	3.384	34.581	27.524	65.85	1.629	-.09
1400.0	3.095	34.594	27.562	62.12	1.693	-.10

STATION: 3 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1450.0	2.947	34.601	27.581	60.16	1.723	-.11

STATION: 4  
LAT: 23° 30.7 N.

DATE: 5/ 4/92  
LON: 109° 8.6 W.

0936 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
2.0	25.740	34.661	22.860	498.95	0.010	4.72
5.0	25.718	34.663	22.869	498.27	0.025	4.72
10.0	24.167	34.628	23.313	456.08	0.049	4.21
15.0	22.785	34.622	23.711	418.24	0.071	3.80
20.0	22.625	34.664	23.789	411.03	0.092	3.79
25.0	21.411	34.454	23.969	394.02	0.112	3.28
30.0	20.665	34.409	24.137	378.14	0.131	3.04
35.0	20.058	34.384	24.280	364.74	0.150	2.86
40.0	18.934	34.303	24.508	343.09	0.167	2.51
45.0	18.470	34.361	24.669	327.89	0.184	2.43
50.0	17.994	34.421	24.833	312.44	0.200	2.36
60.0	16.625	34.549	25.260	272.12	0.229	2.13
70.0	16.587	34.759	25.430	256.25	0.255	2.28
80.0	15.960	34.843	25.640	236.59	0.280	2.20
90.0	15.357	34.827	25.764	225.08	0.303	2.05
100.0	14.934	34.865	25.886	213.66	0.325	1.99
125.0	13.771	34.803	26.087	195.14	0.376	1.69
150.0	13.188	34.791	26.198	185.21	0.423	1.56
175.0	12.688	34.766	26.279	178.08	0.468	1.44
200.0	12.157	34.751	26.371	169.83	0.512	1.32
225.0	11.765	34.736	26.435	164.33	0.554	1.24
250.0	11.352	34.716	26.496	158.92	0.594	1.14
275.0	11.018	34.685	26.534	155.85	0.633	1.06
300.0	10.662	34.667	26.584	151.51	0.672	0.98
325.0	10.294	34.643	26.630	147.50	0.709	0.90
350.0	9.874	34.623	26.686	142.43	0.746	0.81
375.0	9.601	34.607	26.720	139.61	0.781	0.75
400.0	9.267	34.603	26.772	134.96	0.815	0.69
425.0	8.809	34.582	26.829	129.68	0.848	0.60
450.0	8.511	34.578	26.872	125.78	0.880	0.55
475.0	8.201	34.581	26.922	121.23	0.911	0.51
500.0	7.806	34.556	26.962	117.56	0.941	0.43
550.0	7.194	34.531	27.030	111.26	0.998	0.32
600.0	6.576	34.505	27.094	105.20	1.052	0.22
650.0	6.198	34.509	27.147	100.42	1.104	0.17
700.0	5.674	34.497	27.204	94.96	1.152	0.10
750.0	5.365	34.502	27.245	91.17	1.199	0.06
800.0	5.119	34.505	27.277	88.36	1.244	0.04
850.0	4.920	34.517	27.310	85.49	1.287	0.02
900.0	4.587	34.513	27.344	82.13	1.329	-.02
950.0	4.424	34.527	27.373	79.56	1.369	-.02
1000.0	4.218	34.541	27.406	76.46	1.408	-.03
1100.0	3.921	34.554	27.448	72.76	1.483	-.06
1200.0	3.530	34.570	27.500	67.67	1.553	-.08
1300.0	3.293	34.581	27.532	64.76	1.619	-.10
1400.0	3.058	34.593	27.564	61.76	1.682	-.11

STATION: 4 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.797	34.605	27.598	58.39	1.743	-.12
1600.0	2.599	34.614	27.622	55.95	1.800	-.13
1700.0	2.491	34.620	27.637	54.76	1.855	-.14
1800.0	2.381	34.625	27.651	53.57	1.909	-.14
1900.0	2.232	34.632	27.669	51.73	1.962	-.15
2000.0	2.113	34.640	27.685	50.14	2.013	-.15
2100.0	2.006	34.646	27.699	48.80	2.062	-.16
2162.0	1.963	34.649	27.705	48.30	2.093	-.16



STATION: 5  
LAT: 23° 32.7 N.

DATE: 5/ 4/92  
LON: 109° 1.8 W.

0453 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.484	34.634	22.919	493.31	0.005	4.62
5.0	25.491	34.634	22.917	493.67	0.025	4.62
10.0	25.224	34.611	22.982	487.71	0.049	4.52
15.0	22.829	34.553	23.646	424.44	0.072	3.76
20.0	22.241	34.574	23.829	407.17	0.093	3.61
25.0	21.549	34.575	24.023	388.88	0.113	3.42
30.0	20.564	34.588	24.301	362.57	0.132	3.15
35.0	20.091	34.612	24.445	349.01	0.150	3.05
40.0	19.600	34.648	24.601	334.30	0.167	2.94
45.0	18.840	34.700	24.836	312.10	0.183	2.79
50.0	18.472	34.737	24.957	300.73	0.198	2.72
60.0	17.645	34.775	25.190	278.83	0.227	2.55
70.0	16.742	34.799	25.425	256.80	0.254	2.35
80.0	16.145	34.864	25.614	239.11	0.279	2.26
90.0	15.268	34.855	25.805	221.14	0.301	2.05
100.0	14.923	34.856	25.882	214.09	0.323	1.98
125.0	13.687	34.854	26.144	189.73	0.374	1.71
150.0	13.043	34.826	26.254	179.84	0.420	1.56
175.0	12.520	34.796	26.335	172.70	0.464	1.43
200.0	11.771	34.738	26.434	163.69	0.506	1.24
225.0	11.273	34.708	26.504	157.53	0.546	1.12
250.0	11.005	34.693	26.542	154.47	0.585	1.06
275.0	10.713	34.688	26.590	150.30	0.623	1.01
300.0	10.197	34.644	26.647	145.26	0.660	0.88
325.0	9.760	34.618	26.701	140.40	0.696	0.79
350.0	9.425	34.602	26.744	136.61	0.730	0.72
375.0	8.975	34.564	26.788	132.69	0.764	0.62
400.0	8.690	34.561	26.830	128.90	0.797	0.57
425.0	8.431	34.566	26.875	124.98	0.828	0.53
450.0	8.123	34.552	26.911	121.76	0.859	0.47
475.0	7.853	34.543	26.944	118.80	0.889	0.43
500.0	7.563	34.531	26.977	115.82	0.919	0.37
550.0	7.039	34.521	27.044	109.78	0.975	0.29
600.0	6.573	34.502	27.092	105.38	1.028	0.22
650.0	6.074	34.493	27.150	99.93	1.080	0.14
700.0	5.840	34.508	27.192	96.34	1.129	0.13
750.0	5.388	34.503	27.243	91.39	1.176	0.07
800.0	5.192	34.519	27.279	88.26	1.221	0.06
850.0	4.824	34.523	27.325	83.84	1.264	0.02
900.0	4.603	34.529	27.355	81.14	1.305	0.00
950.0	4.365	34.539	27.389	77.95	1.345	-.02
1000.0	4.190	34.547	27.414	75.68	1.383	-.03
1100.0	3.929	34.557	27.450	72.64	1.457	-.05
1200.0	3.608	34.572	27.494	68.46	1.528	-.07
1300.0	3.382	34.584	27.526	65.61	1.595	-.09
1400.0	2.996	34.601	27.576	60.43	1.658	-.11

STATION: 5 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.700	34.614	27.613	56.58	1.717	-.12
1600.0	2.543	34.623	27.634	54.63	1.772	-.13
1700.0	2.400	34.629	27.652	53.01	1.826	-.14
1800.0	2.293	34.635	27.666	51.78	1.878	-.14
1900.0	2.192	34.640	27.678	50.66	1.930	-.15
2000.0	2.094	34.646	27.692	49.47	1.980	-.15
2100.0	2.014	34.651	27.702	48.53	2.029	-.15
2200.0	1.933	34.656	27.713	47.56	2.077	-.16
2300.0	1.871	34.660	27.722	46.87	2.124	-.16
2400.0	1.845	34.663	27.727	46.69	2.171	-.16
2500.0	1.811	34.665	27.731	46.47	2.217	-.16
2567.0	1.801	34.665	27.733	46.57	2.248	-.16

STATION: 6  
LAT: 23° 33.1 N.

DATE: 5/ 4/92  
LON: 108° 58.0 W.

0148 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.730	34.644	22.851	499.84	0.005	4.70
5.0	25.739	34.643	22.847	500.33	0.025	4.71
10.0	23.954	34.482	23.265	460.61	0.050	4.04
15.0	22.029	34.491	23.825	407.33	0.071	3.49
20.0	21.506	34.476	23.959	394.74	0.091	3.33
25.0	20.875	34.448	24.110	380.53	0.110	3.13
30.0	20.318	34.420	24.238	368.51	0.129	2.96
35.0	19.508	34.414	24.446	348.87	0.147	2.74
40.0	19.122	34.424	24.553	338.85	0.164	2.65
45.0	18.761	34.423	24.644	330.35	0.181	2.55
50.0	18.377	34.436	24.750	320.38	0.197	2.47
60.0	17.637	34.459	24.950	301.68	0.228	2.30
70.0	16.803	34.492	25.174	280.56	0.258	2.12
80.0	16.012	34.491	25.357	263.44	0.285	1.94
90.0	15.180	34.499	25.550	245.32	0.310	1.76
100.0	14.742	34.544	25.681	233.15	0.334	1.70
125.0	13.672	34.729	26.050	198.60	0.388	1.61
150.0	12.703	34.759	26.270	178.25	0.435	1.44
175.0	12.062	34.740	26.380	168.27	0.478	1.30
200.0	11.456	34.700	26.464	160.80	0.519	1.15
225.0	10.932	34.672	26.538	154.17	0.559	1.03
250.0	10.649	34.659	26.579	150.78	0.597	0.97
275.0	10.313	34.641	26.624	146.91	0.634	0.90
300.0	10.063	34.628	26.657	144.19	0.670	0.85
325.0	9.684	34.609	26.707	139.82	0.706	0.77
350.0	9.329	34.587	26.748	136.16	0.740	0.69
375.0	8.975	34.570	26.792	132.25	0.774	0.62
400.0	8.576	34.554	26.843	127.65	0.806	0.55
425.0	8.306	34.549	26.880	124.32	0.838	0.50
450.0	8.027	34.540	26.916	121.20	0.869	0.45
475.0	7.801	34.532	26.943	118.84	0.899	0.41
500.0	7.592	34.539	26.979	115.65	0.928	0.39
550.0	7.040	34.515	27.039	110.24	0.985	0.29
600.0	6.579	34.510	27.098	104.87	1.038	0.22
650.0	6.308	34.516	27.138	101.40	1.090	0.19
700.0	5.904	34.514	27.189	96.75	1.139	0.14
750.0	5.603	34.514	27.226	93.38	1.187	0.10
800.0	5.263	34.513	27.266	89.62	1.232	0.06
850.0	4.904	34.517	27.311	85.29	1.276	0.02
900.0	4.614	34.525	27.350	81.58	1.318	0.00
950.0	4.383	34.532	27.381	78.69	1.358	-0.02
1000.0	4.144	34.541	27.414	75.56	1.396	-0.04
1100.0	3.804	34.557	27.462	71.13	1.470	-0.06
1200.0	3.506	34.573	27.505	67.16	1.539	-0.08
1300.0	3.287	34.583	27.534	64.54	1.606	-0.09
1400.0	3.021	34.594	27.568	61.24	1.668	-0.11



STATION: 6 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.734	34.608	27.605	57.43	1.727	-.13
1600.0	2.567	34.616	27.627	55.42	1.783	-.13
1700.0	2.416	34.624	27.646	53.57	1.838	-.14
1800.0	2.292	34.630	27.662	52.13	1.891	-.15
1900.0	2.155	34.637	27.679	50.43	1.942	-.15
2000.0	2.087	34.641	27.688	49.75	1.992	-.15
2100.0	1.986	34.648	27.702	48.41	2.041	-.16
2200.0	1.919	34.652	27.711	47.68	2.089	-.16
2300.0	1.865	34.659	27.721	46.87	2.136	-.16

STATION: 7  
LAT: 23° 34.4 N.

DATE: 5/ 3/92  
LON: 108° 52.8 W.

2318 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.616	34.616	22.865	498.49	0.005	4.65
5.0	25.304	34.596	22.945	490.94	0.025	4.54
10.0	24.546	34.586	23.168	469.92	0.049	4.30
15.0	23.762	34.542	23.367	451.06	0.072	4.03
20.0	22.575	34.506	23.683	421.11	0.094	3.65
25.0	21.858	34.471	23.858	404.58	0.114	3.42
30.0	20.822	34.452	24.128	379.05	0.134	3.12
35.0	20.073	34.448	24.324	360.47	0.152	2.92
40.0	19.783	34.448	24.401	353.38	0.170	2.84
45.0	19.523	34.439	24.462	347.76	0.188	2.76
50.0	18.765	34.427	24.646	330.31	0.205	2.56
60.0	18.068	34.472	24.855	310.78	0.237	2.42
70.0	17.769	34.494	24.945	302.50	0.267	2.36
80.0	16.998	34.502	25.137	284.54	0.297	2.18
90.0	16.220	34.646	25.429	256.97	0.323	2.11
100.0	15.100	34.748	25.760	225.70	0.347	1.93
125.0	13.373	34.785	26.155	188.61	0.399	1.59
150.0	12.199	34.759	26.368	168.80	0.444	1.34
175.0	11.300	34.710	26.499	156.71	0.485	1.13
200.0	10.829	34.681	26.563	151.16	0.523	1.02
225.0	10.521	34.663	26.604	147.75	0.560	0.95
250.0	10.261	34.646	26.636	145.13	0.597	0.90
275.0	9.906	34.626	26.682	141.20	0.633	0.82
300.0	9.625	34.609	26.716	138.35	0.668	0.76
325.0	9.358	34.594	26.749	135.62	0.702	0.70
350.0	9.085	34.582	26.784	132.63	0.735	0.65
375.0	8.805	34.581	26.828	128.76	0.768	0.60
400.0	8.534	34.570	26.862	125.82	0.800	0.55
425.0	8.165	34.547	26.900	122.33	0.831	0.48
450.0	7.827	34.539	26.944	118.29	0.861	0.42
475.0	7.590	34.530	26.972	115.88	0.890	0.38
500.0	7.427	34.530	26.996	113.91	0.919	0.35
550.0	6.997	34.517	27.046	109.48	0.975	0.28
600.0	6.641	34.518	27.096	105.14	1.029	0.24
650.0	6.259	34.518	27.146	100.58	1.080	0.19
700.0	5.777	34.514	27.204	95.06	1.129	0.12
750.0	5.412	34.518	27.252	90.59	1.175	0.08
800.0	5.014	34.525	27.305	85.55	1.220	0.04
850.0	4.730	34.531	27.342	82.07	1.261	0.01
900.0	4.540	34.536	27.367	79.85	1.302	0.00
950.0	4.364	34.542	27.391	77.72	1.341	-0.02
1000.0	4.151	34.550	27.421	74.98	1.379	-0.03
1100.0	3.849	34.561	27.461	71.37	1.452	-0.06
1200.0	3.620	34.572	27.493	68.60	1.522	-0.07
1300.0	3.272	34.587	27.539	64.07	1.589	-0.09
1400.0	2.860	34.605	27.591	58.53	1.650	-0.12

STATION: 7 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.656	34.616	27.618	55.92	1.707	-.13
1600.0	2.467	34.626	27.643	53.51	1.761	-.13
1700.0	2.362	34.630	27.655	52.48	1.815	-.14
1800.0	2.301	34.634	27.664	51.95	1.867	-.14
1900.0	2.183	34.640	27.679	50.55	1.918	-.15
2000.0	2.049	34.650	27.698	48.62	1.968	-.15
2100.0	1.988	34.652	27.705	48.14	2.016	-.15
2200.0	1.919	34.657	27.715	47.31	2.064	-.16
2300.0	1.879	34.660	27.721	46.97	2.111	-.16
2372.0	1.871	34.662	27.724	46.99	2.145	-.16

STATION: 8  
LAT: 23° 35.7 N.

DATE: 5/ 2/92  
LON: 108° 47.6 W.

2123 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
2.0	26.082	34.613	22.718	512.56	0.010	4.79
5.0	26.131	34.623	22.710	513.42	0.026	4.81
10.0	25.058	34.573	23.003	485.62	0.051	4.44
15.0	23.439	34.501	23.431	445.01	0.074	3.90
20.0	22.291	34.491	23.752	414.53	0.096	3.56
25.0	21.941	34.487	23.847	405.63	0.116	3.46
30.0	21.134	34.453	24.044	387.05	0.136	3.21
35.0	20.343	34.431	24.240	368.51	0.155	2.97
40.0	19.744	34.420	24.389	354.45	0.173	2.81
45.0	19.505	34.430	24.459	347.97	0.191	2.75
50.0	18.826	34.446	24.645	330.40	0.207	2.59
60.0	18.413	34.460	24.760	319.81	0.240	2.49
70.0	18.156	34.469	24.831	313.39	0.271	2.44
80.0	16.962	34.523	25.161	282.19	0.301	2.19
90.0	16.411	34.654	25.391	260.61	0.328	2.16
100.0	15.945	34.704	25.537	247.02	0.354	2.09
125.0	13.952	34.784	26.035	200.15	0.409	1.71
150.0	12.289	34.763	26.354	170.17	0.455	1.36
175.0	11.037	34.692	26.533	153.40	0.495	1.07
200.0	10.546	34.663	26.599	147.63	0.533	0.96
225.0	10.220	34.638	26.636	144.50	0.569	0.88
250.0	9.902	34.625	26.681	140.69	0.605	0.82
275.0	9.600	34.606	26.717	137.66	0.640	0.75
300.0	9.309	34.593	26.755	134.42	0.674	0.69
325.0	9.127	34.587	26.780	132.45	0.707	0.66
350.0	8.920	34.576	26.805	130.47	0.740	0.62
375.0	8.635	34.565	26.842	127.30	0.772	0.56
400.0	8.364	34.556	26.877	124.25	0.804	0.51
425.0	8.133	34.548	26.906	121.78	0.834	0.47
450.0	7.980	34.539	26.922	120.57	0.865	0.44
475.0	7.828	34.544	26.949	118.36	0.894	0.42
500.0	7.654	34.541	26.972	116.42	0.924	0.40
550.0	7.182	34.534	27.034	110.86	0.981	0.32
600.0	6.639	34.523	27.100	104.74	1.035	0.24
650.0	6.269	34.518	27.145	100.72	1.086	0.19
700.0	5.716	34.515	27.213	94.18	1.135	0.12
750.0	5.288	34.520	27.269	88.85	1.180	0.07
800.0	5.042	34.523	27.300	86.05	1.224	0.04
850.0	4.623	34.534	27.356	80.52	1.265	0.00
900.0	4.398	34.539	27.385	77.88	1.305	-.02
950.0	4.199	34.548	27.414	75.26	1.343	-.03
1000.0	4.071	34.552	27.430	73.86	1.380	-.04
1100.0	3.856	34.561	27.460	71.46	1.453	-.06
1200.0	3.630	34.571	27.491	68.80	1.523	-.07
1300.0	3.372	34.584	27.527	65.49	1.590	-.09
1400.0	3.127	34.594	27.559	62.51	1.654	-.10

STATION: 8 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.693	34.613	27.613	56.58	1.713	-.12
1600.0	2.498	34.625	27.640	53.95	1.768	-.13
1700.0	2.365	34.630	27.655	52.52	1.821	-.14
1791.0	2.244	34.636	27.670	51.08	1.868	-.14

STATION: 9  
LAT: 23° 39.7 N.

DATE: 5/ 3/92  
LON: 108° 39.4 W.

0436 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
2.0	25.640	34.598	22.844	500.54	0.010	4.64
5.0	25.538	34.615	22.888	496.43	0.025	4.62
10.0	24.750	34.523	23.059	480.33	0.050	4.31
15.0	22.695	34.500	23.644	424.62	0.072	3.68
20.0	21.981	34.490	23.838	406.30	0.092	3.47
25.0	21.613	34.479	23.932	397.52	0.113	3.36
30.0	21.039	34.456	24.072	384.36	0.132	3.18
35.0	20.502	34.427	24.195	372.85	0.151	3.01
40.0	19.982	34.417	24.325	360.60	0.169	2.87
45.0	19.208	34.420	24.528	341.40	0.187	2.67
50.0	18.418	34.445	24.747	320.70	0.204	2.48
60.0	17.291	34.471	25.042	292.84	0.234	2.23
70.0	16.186	34.500	25.324	266.29	0.262	1.99
80.0	15.466	34.558	25.532	246.78	0.287	1.87
90.0	14.943	34.615	25.691	231.86	0.311	1.79
100.0	14.595	34.707	25.838	218.18	0.334	1.79
125.0	13.608	34.745	26.076	196.16	0.386	1.61
150.0	12.646	34.771	26.290	176.29	0.432	1.44
175.0	12.034	34.745	26.389	167.39	0.475	1.30
200.0	11.451	34.704	26.468	160.42	0.516	1.15
225.0	11.078	34.692	26.527	155.26	0.555	1.08
250.0	10.600	34.660	26.588	149.86	0.593	0.97
275.0	10.101	34.631	26.652	144.08	0.630	0.86
300.0	9.809	34.610	26.686	141.29	0.666	0.79
325.0	9.493	34.599	26.730	137.44	0.701	0.73
350.0	9.289	34.594	26.760	135.00	0.735	0.69
375.0	8.892	34.573	26.808	130.72	0.768	0.61
400.0	8.534	34.554	26.849	127.00	0.800	0.54
425.0	8.277	34.549	26.885	123.88	0.831	0.50
450.0	8.066	34.545	26.914	121.42	0.862	0.46
475.0	7.804	34.538	26.947	118.44	0.892	0.42
500.0	7.444	34.525	26.989	114.53	0.921	0.35
550.0	6.963	34.507	27.043	109.74	0.977	0.27
600.0	6.674	34.526	27.098	105.01	1.031	0.25
650.0	6.343	34.512	27.131	102.17	1.082	0.19
700.0	5.981	34.514	27.179	97.78	1.132	0.15
750.0	5.577	34.510	27.226	93.34	1.180	0.09
800.0	5.163	34.514	27.279	88.26	1.226	0.05
850.0	4.821	34.521	27.324	83.95	1.269	0.02
900.0	4.563	34.536	27.365	80.13	1.310	0.00
950.0	4.320	34.535	27.390	77.69	1.349	-.03
1000.0	4.082	34.548	27.426	74.29	1.387	-.04
1100.0	3.793	34.559	27.465	70.85	1.459	-.06
1200.0	3.526	34.575	27.505	67.25	1.529	-.08
1300.0	3.319	34.584	27.532	64.85	1.595	-.09
1400.0	3.108	34.592	27.559	62.43	1.658	-.10

STATION: 9 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.845	34.604	27.593	59.04	1.719	-.12
1600.0	2.640	34.614	27.619	56.44	1.777	-.13
1700.0	2.497	34.622	27.638	54.68	1.832	-.14
1800.0	2.362	34.628	27.655	53.12	1.886	-.14
1900.0	2.192	34.636	27.675	50.95	1.938	-.15
2000.0	2.068	34.644	27.692	49.29	1.988	-.15
2100.0	1.985	34.650	27.704	48.25	2.037	-.16
2200.0	1.907	34.654	27.714	47.38	2.084	-.16
2300.0	1.876	34.657	27.719	47.15	2.132	-.16
2400.0	1.864	34.658	27.721	47.30	2.179	-.16
2500.0	1.855	34.659	27.723	47.48	2.226	-.16
2600.0	1.840	34.662	27.728	47.42	2.273	-.16
2674.0	1.840	34.662	27.728	47.42	2.273	-.16



STATION: 10  
LAT: 23° 42.0 N.

DATE: 5/ 3/92  
LON: 108° 34.2 W.

0100 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
3.0	26.096	34.644	22.737	510.78	0.015	4.82
5.0	26.012	34.628	22.751	509.51	0.025	4.78
10.0	24.968	34.606	23.056	480.63	0.050	4.44
15.0	23.718	34.519	23.363	451.49	0.074	4.00
20.0	22.078	34.482	23.805	409.47	0.095	3.49
25.0	21.106	34.459	24.056	385.71	0.115	3.20
30.0	20.921	34.454	24.103	381.46	0.134	3.15
35.0	19.653	34.403	24.400	353.25	0.152	2.77
40.0	18.730	34.436	24.661	328.49	0.169	2.56
45.0	17.945	34.512	24.915	304.50	0.185	2.42
50.0	17.323	34.519	25.071	289.76	0.200	2.27
60.0	16.383	34.491	25.271	270.98	0.229	2.03
70.0	15.882	34.478	25.376	261.27	0.255	1.90
80.0	15.021	34.561	25.632	237.16	0.280	1.77
90.0	14.519	34.665	25.822	219.42	0.302	1.74
100.0	14.137	34.614	25.864	215.66	0.324	1.62
125.0	13.139	34.695	26.133	190.66	0.375	1.48
150.0	12.572	34.706	26.255	179.66	0.421	1.37
175.0	12.030	34.697	26.353	170.84	0.465	1.26
200.0	11.752	34.741	26.440	163.13	0.506	1.24
225.0	11.398	34.709	26.482	159.68	0.547	1.15
250.0	10.947	34.691	26.550	153.60	0.586	1.05
275.0	10.570	34.677	26.607	148.64	0.624	0.97
300.0	10.085	34.633	26.657	144.19	0.660	0.85
325.0	9.632	34.602	26.710	139.48	0.696	0.75
350.0	9.363	34.595	26.749	136.12	0.730	0.70
375.0	9.104	34.589	26.787	132.89	0.764	0.66
400.0	8.648	34.561	26.837	128.25	0.796	0.56
425.0	8.217	34.544	26.890	123.34	0.828	0.48
450.0	7.939	34.537	26.926	120.11	0.858	0.43
475.0	7.712	34.537	26.960	117.16	0.888	0.40
500.0	7.369	34.527	27.002	113.29	0.917	0.34
550.0	6.803	34.516	27.072	106.83	0.972	0.26
600.0	6.304	34.496	27.123	102.14	1.024	0.18
650.0	5.944	34.499	27.171	97.75	1.074	0.13
700.0	5.613	34.509	27.220	93.28	1.122	0.10
750.0	5.377	34.526	27.263	89.55	1.167	0.08
800.0	5.152	34.524	27.288	87.38	1.212	0.06
850.0	4.848	34.527	27.326	83.84	1.255	0.02
900.0	4.612	34.532	27.356	81.03	1.296	0.00
950.0	4.409	34.540	27.385	78.42	1.335	-.02
1000.0	4.233	34.545	27.408	76.35	1.374	-.03
1100.0	3.864	34.557	27.456	71.85	1.448	-.06
1200.0	3.589	34.571	27.495	68.31	1.519	-.08
1300.0	3.330	34.583	27.530	65.06	1.585	-.09
1400.0	3.164	34.592	27.554	63.10	1.649	-.10

STATION: 10 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.905	34.604	27.587	59.75	1.710	-.11
1600.0	2.707	34.614	27.613	57.24	1.769	-.12
1700.0	2.582	34.619	27.629	55.92	1.826	-.13
1800.0	2.426	34.627	27.649	53.97	1.881	-.14
1900.0	2.270	34.634	27.667	52.05	1.934	-.15
2000.0	2.122	34.643	27.687	50.03	1.985	-.15
2100.0	2.034	34.649	27.699	48.93	2.034	-.15
2200.0	1.966	34.653	27.708	48.19	2.083	-.16
2300.0	1.917	34.656	27.715	47.74	2.131	-.16
2400.0	1.877	34.659	27.721	47.39	2.178	-.16
2500.0	1.861	34.661	27.725	47.41	2.226	-.16
2600.0	1.849	34.662	27.727	47.54	2.273	-.16
2700.0	1.846	34.663	27.729	47.79	2.321	-.16
2800.0	1.849	34.663	27.729	48.19	2.369	-.16
2805.0	1.849	34.663	27.729	48.21	2.371	-.16

STATION: 11  
LAT: 23° 42.7 N.

DATE: 5/ 2/92  
LON: 108° 30.9 W.

2118 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.570	34.595	22.863	498.66	0.005	4.62
5.0	25.226	34.621	22.988	486.86	0.025	4.53
10.0	23.445	34.519	23.442	443.69	0.048	3.92
15.0	22.987	34.519	23.575	431.23	0.070	3.78
20.0	22.151	34.470	23.775	412.29	0.091	3.50
25.0	21.706	34.434	23.872	403.24	0.112	3.35
30.0	21.050	34.429	24.049	386.61	0.131	3.16
35.0	20.256	34.418	24.253	367.26	0.150	2.94
40.0	19.474	34.403	24.447	349.00	0.168	2.72
45.0	19.029	34.412	24.568	337.62	0.185	2.61
50.0	18.130	34.423	24.801	315.49	0.202	2.39
60.0	17.380	34.458	25.011	295.83	0.232	2.24
70.0	16.326	34.495	25.288	269.73	0.260	2.01
80.0	15.486	34.475	25.463	253.27	0.286	1.81
90.0	14.921	34.538	25.637	237.03	0.311	1.73
100.0	14.482	34.569	25.756	225.97	0.334	1.66
125.0	14.027	34.795	26.027	200.86	0.387	1.74
150.0	13.277	34.811	26.195	185.48	0.435	1.59
175.0	12.508	34.775	26.321	174.01	0.480	1.41
200.0	11.938	34.739	26.404	166.67	0.523	1.27
225.0	11.700	34.747	26.455	162.33	0.564	1.23
250.0	11.066	34.689	26.527	155.83	0.604	1.07
275.0	10.568	34.647	26.584	150.82	0.642	0.95
300.0	10.125	34.622	26.642	145.67	0.679	0.85
325.0	9.841	34.619	26.688	141.67	0.715	0.80
350.0	9.504	34.607	26.735	137.52	0.750	0.74
375.0	9.052	34.579	26.787	132.80	0.784	0.64
400.0	8.775	34.567	26.822	129.79	0.816	0.59
425.0	8.556	34.562	26.852	127.20	0.849	0.55
450.0	8.254	34.554	26.893	123.60	0.880	0.50
475.0	7.878	34.541	26.939	119.32	0.910	0.43
500.0	7.453	34.514	26.979	115.47	0.940	0.35
550.0	6.846	34.511	27.062	107.80	0.995	0.26
600.0	6.367	34.499	27.117	102.78	1.048	0.19
650.0	6.082	34.503	27.157	99.30	1.098	0.15
700.0	5.673	34.500	27.206	94.73	1.146	0.10
750.0	5.379	34.510	27.250	90.76	1.193	0.07
800.0	5.135	34.523	27.289	87.23	1.237	0.05
850.0	4.944	34.532	27.319	84.68	1.280	0.04
900.0	4.688	34.533	27.349	81.91	1.322	0.01
950.0	4.410	34.533	27.379	78.95	1.362	-0.02
1000.0	4.237	34.544	27.407	76.48	1.401	-0.03
1100.0	3.860	34.561	27.460	71.51	1.475	-0.06
1200.0	3.587	34.573	27.497	68.13	1.544	-0.07
1300.0	3.314	34.586	27.534	64.64	1.611	-0.09
1400.0	3.135	34.593	27.557	62.68	1.675	-0.10

STATION: 11 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.892	34.605	27.589	59.52	1.736	-.11
1600.0	2.688	34.615	27.616	56.94	1.794	-.12
1700.0	2.539	34.623	27.635	55.11	1.850	-.13
1800.0	2.396	34.629	27.653	53.46	1.904	-.14
1900.0	2.272	34.635	27.668	52.00	1.957	-.14
2000.0	2.131	34.642	27.685	50.21	2.008	-.15
2100.0	2.050	34.648	27.697	49.20	2.058	-.15
2200.0	1.984	34.653	27.707	48.42	2.107	-.15
2300.0	1.913	34.658	27.717	47.55	2.155	-.16
2400.0	1.879	34.660	27.722	47.35	2.202	-.16
2500.0	1.861	34.662	27.725	47.34	2.250	-.16
2600.0	1.856	34.663	27.727	47.56	2.297	-.16
2700.0	1.861	34.663	27.728	47.99	2.345	-.16
2800.0	1.852	34.664	27.730	48.16	2.393	-.16
2831.0	1.852	34.665	27.731	48.23	2.408	-.16

STATION: 12  
LAT: 23° 46.4 N.

DATE: 5/ 2/92  
LON: 108° 25.6 W.

1806 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
2.0	25.761	34.611	22.816	503.17	0.010	4.69
5.0	25.721	34.616	22.832	501.75	0.025	4.68
10.0	25.395	34.622	22.938	491.92	0.050	4.58
15.0	23.372	34.501	23.450	443.15	0.074	3.88
20.0	21.752	34.471	23.887	401.59	0.094	3.39
25.0	21.110	34.402	24.012	389.95	0.114	3.16
30.0	20.703	34.394	24.116	380.20	0.134	3.04
35.0	20.475	34.384	24.169	375.28	0.152	2.97
40.0	20.063	34.366	24.265	366.34	0.171	2.85
45.0	19.162	34.367	24.499	344.13	0.189	2.61
50.0	18.470	34.395	24.696	325.58	0.206	2.46
60.0	17.502	34.462	24.985	298.34	0.237	2.27
70.0	16.721	34.557	25.244	273.98	0.265	2.16
80.0	16.404	34.669	25.404	259.05	0.292	2.17
90.0	15.846	34.677	25.538	246.54	0.317	2.04
100.0	15.270	34.741	25.717	229.81	0.341	1.96
125.0	14.405	34.862	25.999	203.63	0.395	1.87
150.0	13.678	34.855	26.147	190.15	0.444	1.71
175.0	12.851	34.799	26.272	178.77	0.490	1.50
200.0	12.175	34.732	26.353	171.56	0.534	1.31
225.0	11.608	34.695	26.432	164.49	0.576	1.18
250.0	11.293	34.687	26.485	160.00	0.617	1.11
275.0	10.863	34.665	26.546	154.60	0.656	1.02
300.0	10.498	34.647	26.597	150.16	0.694	0.94
325.0	10.247	34.650	26.643	146.19	0.731	0.89
350.0	9.722	34.619	26.709	140.21	0.767	0.78
375.0	9.166	34.577	26.767	134.77	0.801	0.66
400.0	8.922	34.578	26.807	131.29	0.835	0.62
425.0	8.358	34.540	26.866	125.78	0.867	0.50
450.0	8.065	34.521	26.895	123.18	0.898	0.44
475.0	7.659	34.503	26.941	118.89	0.928	0.37
500.0	7.511	34.522	26.977	115.72	0.957	0.36
550.0	6.902	34.494	27.041	109.84	1.014	0.25
600.0	6.497	34.484	27.088	105.67	1.068	0.19
650.0	6.133	34.486	27.137	101.24	1.119	0.15
700.0	5.780	34.497	27.191	96.36	1.169	0.11
750.0	5.418	34.490	27.229	92.74	1.216	0.06
800.0	5.101	34.498	27.273	88.65	1.261	0.03
850.0	4.859	34.510	27.311	85.24	1.305	0.01
900.0	4.625	34.522	27.347	81.94	1.347	-0.01
950.0	4.465	34.534	27.374	79.55	1.387	-0.01
1000.0	4.232	34.541	27.405	76.64	1.426	-0.03
1100.0	3.845	34.556	27.457	71.69	1.500	-0.06
1200.0	3.567	34.571	27.497	68.04	1.571	-0.08
1300.0	3.289	34.584	27.535	64.49	1.637	-0.09
1400.0	3.064	34.594	27.564	61.75	1.700	-0.11

STATION: 12 (cont)

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1500.0	2.864	34.604	27.591	59.26	1.760	-.12
1600.0	2.688	34.613	27.614	57.09	1.818	-.13
1700.0	2.495	34.623	27.639	54.58	1.874	-.13
1753.0	2.389	34.627	27.651	53.29	1.903	-.14



STATION: 13  
LAT: 23° 48.3 N.

DATE: 5/ 2/92  
LON: 108° 21.5 W.

1130 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.245	34.598	22.965	488.92	0.005	4.52
5.0	25.146	34.592	22.991	486.62	0.024	4.48
10.0	23.941	34.484	23.270	460.10	0.048	4.04
15.0	22.140	34.464	23.774	412.25	0.070	3.50
20.0	21.464	34.462	23.960	394.66	0.090	3.30
25.0	21.279	34.455	24.006	390.50	0.109	3.25
30.0	20.966	34.416	24.061	385.38	0.129	3.13
35.0	20.494	34.363	24.148	377.29	0.148	2.96
40.0	20.123	34.384	24.263	366.54	0.167	2.88
45.0	19.495	34.385	24.428	350.99	0.184	2.71
50.0	18.587	34.347	24.630	331.87	0.201	2.45
60.0	17.716	34.360	24.855	310.72	0.234	2.24
70.0	16.647	34.450	25.179	280.14	0.263	2.06
80.0	15.886	34.570	25.446	254.93	0.290	1.97
90.0	15.096	34.582	25.632	237.48	0.314	1.80
100.0	14.525	34.591	25.763	225.24	0.337	1.68
125.0	13.350	34.636	26.044	199.09	0.390	1.47
150.0	12.937	34.715	26.189	185.94	0.438	1.45
175.0	12.434	34.723	26.295	176.44	0.483	1.36
200.0	12.223	34.769	26.372	169.74	0.526	1.35
225.0	11.847	34.747	26.428	165.02	0.568	1.26
250.0	11.450	34.711	26.474	161.05	0.609	1.16
275.0	11.141	34.690	26.515	157.65	0.649	1.08
300.0	10.665	34.662	26.579	151.93	0.688	0.98
325.0	10.284	34.637	26.627	147.78	0.725	0.89
350.0	9.713	34.609	26.702	140.80	0.761	0.77
375.0	9.414	34.605	26.749	136.70	0.796	0.72
400.0	9.082	34.582	26.785	133.53	0.830	0.65
425.0	8.627	34.567	26.845	127.94	0.862	0.56
450.0	8.285	34.551	26.886	124.29	0.894	0.50
475.0	7.963	34.537	26.923	120.89	0.925	0.44
500.0	7.532	34.512	26.967	116.77	0.954	0.36
550.0	6.982	34.506	27.040	110.08	1.011	0.27
600.0	6.651	34.511	27.089	105.80	1.065	0.23
650.0	6.200	34.491	27.133	101.78	1.117	0.16
700.0	5.758	34.495	27.192	96.21	1.166	0.11
750.0	5.440	34.497	27.232	92.51	1.213	0.07
800.0	5.141	34.497	27.268	89.23	1.258	0.03
850.0	4.970	34.511	27.299	86.57	1.302	0.02
900.0	4.753	34.529	27.338	83.02	1.345	0.01
950.0	4.487	34.533	27.371	79.90	1.385	-0.01
1000.0	4.231	34.543	27.407	76.48	1.424	-0.03
1100.0	3.913	34.555	27.450	72.59	1.499	-0.06
1200.0	3.563	34.571	27.498	67.99	1.569	-0.08
1300.0	3.284	34.583	27.535	64.51	1.635	-0.10
1345.0	3.055	34.595	27.566	61.21	1.664	-0.11



STATION: 14  
LAT: 23° 50.0 N.

DATE: 5/ 2/92  
LON: 108° 17.7 W.

0930 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.627	34.569	22.826	502.21	0.005	4.62
5.0	25.627	34.566	22.824	502.58	0.025	4.61
10.0	24.040	34.465	23.227	464.27	0.049	4.05
15.0	23.742	34.507	23.347	453.03	0.072	3.99
20.0	23.471	34.505	23.425	445.80	0.095	3.91
25.0	22.878	34.504	23.596	429.69	0.117	3.74
30.0	22.525	34.490	23.686	421.28	0.138	3.63
35.0	22.043	34.497	23.827	407.98	0.159	3.49
40.0	21.515	34.468	23.952	396.27	0.179	3.32
45.0	21.017	34.434	24.062	385.91	0.198	3.16
50.0	20.445	34.434	24.216	371.40	0.217	3.00
60.0	19.337	34.425	24.499	344.70	0.253	2.70
70.0	16.762	34.303	25.039	293.44	0.285	1.97
80.0	16.380	34.516	25.292	269.69	0.313	2.04
90.0	15.668	34.526	25.462	253.73	0.339	1.89
100.0	14.797	34.549	25.672	233.93	0.363	1.71
125.0	13.726	34.602	25.941	208.98	0.418	1.52
150.0	13.197	34.746	26.161	188.69	0.468	1.53
175.0	12.828	34.740	26.231	182.66	0.514	1.45
200.0	12.413	34.755	26.325	174.32	0.559	1.38
225.0	11.983	34.731	26.390	168.69	0.602	1.27
250.0	11.822	34.734	26.423	166.11	0.643	1.25
275.0	11.258	34.694	26.497	159.44	0.684	1.11
300.0	10.892	34.675	26.549	154.93	0.723	1.03
325.0	10.453	34.641	26.601	150.37	0.762	0.92
350.0	10.082	34.623	26.651	145.92	0.799	0.84
375.0	9.796	34.618	26.696	142.02	0.835	0.79
400.0	9.349	34.588	26.747	137.39	0.870	0.69
425.0	9.023	34.579	26.793	133.29	0.904	0.63
450.0	8.493	34.547	26.851	127.79	0.936	0.53
475.0	7.968	34.533	26.919	121.26	0.967	0.44
500.0	7.660	34.534	26.965	117.02	0.997	0.39
550.0	7.269	34.527	27.016	112.63	1.054	0.33
600.0	6.793	34.517	27.075	107.34	1.109	0.26
650.0	6.335	34.509	27.129	102.28	1.162	0.19
700.0	6.013	34.510	27.172	98.50	1.211	0.15
750.0	5.768	34.518	27.209	95.27	1.260	0.12
758.0	5.720	34.518	27.215	94.73	1.268	0.12

STATION: 15  
LAT: 23° 54.5 N.

DATE: 5/ 2/92  
LON: 108° 8.6 W.

0630 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	25.802	34.581	22.781	506.51	0.005	4.68
5.0	25.758	34.583	22.796	505.22	0.025	4.67
10.0	25.452	34.577	22.886	496.84	0.050	4.57
15.0	24.563	34.496	23.095	477.10	0.075	4.23
20.0	23.759	34.492	23.331	454.78	0.098	3.99
25.0	23.158	34.473	23.492	439.63	0.120	3.80
30.0	22.656	34.481	23.642	425.48	0.142	3.66
35.0	22.285	34.494	23.757	414.69	0.163	3.56
40.0	22.051	34.495	23.824	408.52	0.183	3.49
45.0	22.032	34.497	23.831	408.05	0.204	3.49
50.0	21.567	34.488	23.953	396.54	0.224	3.35
60.0	20.591	34.510	24.236	369.96	0.262	3.10
70.0	19.205	34.645	24.702	325.80	0.297	2.84
80.0	17.444	34.432	24.976	299.82	0.328	2.23
90.0	16.896	34.555	25.202	278.67	0.357	2.19
100.0	16.340	34.549	25.327	267.00	0.385	2.06
125.0	14.408	34.553	25.760	226.32	0.446	1.63
150.0	13.316	34.670	26.078	196.58	0.499	1.49
175.0	12.721	34.747	26.258	180.10	0.546	1.43
200.0	12.300	34.731	26.328	173.96	0.590	1.34
225.0	11.925	34.717	26.390	168.65	0.633	1.25
250.0	11.562	34.712	26.454	162.99	0.674	1.18
275.0	11.217	34.684	26.497	159.44	0.715	1.09
300.0	10.938	34.686	26.549	154.93	0.754	1.04
325.0	10.498	34.652	26.601	150.33	0.792	0.94
350.0	10.107	34.626	26.649	146.12	0.829	0.85
375.0	9.913	34.632	26.687	142.93	0.866	0.82
400.0	9.377	34.600	26.752	136.96	0.900	0.71
425.0	9.008	34.581	26.797	132.90	0.934	0.63
450.0	8.623	34.566	26.846	128.40	0.967	0.56
475.0	8.339	34.549	26.876	125.71	0.999	0.50
500.0	8.011	34.546	26.924	121.37	1.029	0.45
550.0	7.157	34.519	27.026	111.61	1.087	0.31
600.0	6.800	34.520	27.076	107.22	1.142	0.26
650.0	6.248	34.518	27.148	100.43	1.194	0.18
700.0	5.587	34.519	27.232	92.20	1.243	0.10
726.0	5.351	34.519	27.260	89.45	1.266	0.08

STATION: 17  
LAT: 24° 0.0 N.

DATE: 5/ 2/92  
LON: 107° 57.6 W.

0411 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	26.055	34.569	22.693	514.89	0.005	4.75
5.0	25.864	34.566	22.750	509.59	0.026	4.69
10.0	25.753	34.558	22.779	507.07	0.051	4.65
15.0	24.923	34.543	23.022	484.07	0.076	4.38
20.0	24.322	34.527	23.191	468.16	0.100	4.18
25.0	23.851	34.509	23.317	456.32	0.123	4.03
30.0	23.336	34.512	23.470	441.91	0.145	3.88
35.0	22.796	34.507	23.622	427.60	0.167	3.72
40.0	22.433	34.501	23.721	418.35	0.188	3.61
45.0	22.030	34.481	23.819	409.15	0.209	3.48
50.0	21.634	34.507	23.949	396.93	0.229	3.39
60.0	20.629	34.489	24.209	372.45	0.268	3.09
70.0	19.233	34.399	24.507	344.37	0.304	2.66
80.0	17.877	34.403	24.849	311.97	0.336	2.32
90.0	17.580	34.598	25.071	291.17	0.367	2.39
100.0	17.002	34.587	25.202	279.05	0.395	2.24
125.0	15.194	34.637	25.654	236.52	0.459	1.87
150.0	14.062	34.653	25.911	212.64	0.515	1.63
175.0	12.858	34.668	26.169	188.52	0.565	1.40
200.0	12.475	34.695	26.266	179.89	0.611	1.34
225.0	12.132	34.724	26.356	171.96	0.655	1.30
250.0	11.675	34.705	26.428	165.56	0.697	1.20
275.0	11.409	34.696	26.471	161.99	0.738	1.14
300.0	11.182	34.675	26.497	160.05	0.779	1.08
325.0	10.932	34.680	26.546	155.82	0.818	1.04
350.0	10.684	34.669	26.582	152.84	0.856	0.98
375.0	10.418	34.655	26.619	149.81	0.894	0.93
400.0	10.039	34.644	26.676	144.68	0.931	0.85
401.0	10.034	34.644	26.676	144.69	0.933	0.85

STATION: 19  
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DATE: 5/ 2/92  
LON: 107° 46.6 W.

0123 GMT

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
1.0	26.186	34.528	22.621	521.75	0.005	4.76
5.0	25.897	34.534	22.716	512.87	0.026	4.67
10.0	25.192	34.513	22.917	493.85	0.051	4.44
15.0	24.224	34.461	23.170	469.95	0.075	4.10
20.0	23.778	34.458	23.299	457.77	0.098	3.97
25.0	23.602	34.468	23.359	452.31	0.121	3.92
30.0	23.085	34.463	23.505	438.52	0.143	3.77
35.0	22.783	34.476	23.602	429.49	0.165	3.69
40.0	22.241	34.495	23.770	413.61	0.186	3.55
45.0	21.657	34.464	23.910	400.48	0.207	3.36
50.0	21.135	34.461	24.051	387.19	0.226	3.21
60.0	19.677	34.412	24.402	354.03	0.264	2.78
70.0	17.648	34.458	24.947	302.32	0.296	2.30
75.0	17.595	34.480	24.977	299.64	0.311	2.31

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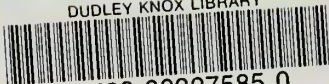


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